Universidad Zaragoza

Academic Year/course: 2022/23

27338 - Business innovation and technological change

Syllabus Information

Academic Year: 2022/23
Subject: 27338 - Business innovation and technological change
Faculty / School: 109 - Facultad de Economía y Empresa
301 - Facultad de Ciencias Sociales y Humanas
Degree: 448 - Degree in Business Administration and Management
454 - Degree in Business Administration and Management
ECTS: 5.0
Year: 4
Semester: 448-First semester o Second semester
454-First semester
107-First semester o Second semester
Subject Type: Optional
Module:

1. General information

1.1. Aims of the course

1. To diagnose and argue the main aspects directly linked to the innovation management of the company.
2. To understand the process of generation and diffusion of innovations in the business field.
3. To assess the innovative activity of companies or organizations.
4. To diagnose and identify the goals, barriers and outcomes of innovation.
5. To develop the core activities in innovation management.
6. To identify, develop and implement various tools for innovation management.

These objectives are in line with the Sustainable Development Objectives (SDO) of the 2030 agenda and specific goals (https://www.un.org/sustainabledevelopment/es/), contributing to some extent to their achievement:

Objective 8: To foster the sustained economic growth, inclusive and sustainable, full and productive employment and respectable job for everyone.

Goal 8.2: To reach higher levels of economic productivity by means of diversification, technological updating and innovation, among other things by focusing on those sectors with large added value and the intensive use of the workforce.

Goal 8.3: To foster politics aimed to development, which support productive activities, respectable job creation, entrepreneurship, creativity and innovation, and to promote the formalization and the growth of micro, small and medium enterprise, even by the access to financial services.

Objective 9: To build resilient infrastructures, to promote the inclusive and sustainable industrialization and to foster the innovation.

Goal 9.1: To develop reliable, sustainable, resilient and high quality infrastructures, including regional and trans-boarding ones, in order to support the economic development and human welfare, stressing the affordable and fair access for everyone.

Goal 9.2: To promote an inclusive and sustainable industrialization and, from now to 2030, to increase significantly the contribution of industry to employment and to gross domestic product, according to national circumstances, and to double that contribution in the case of less development countries.

Goal 9.4: From now to 2030, to update the infrastructures and to reconvert the industries to be sustainable, using the resources in a more efficient way and promoting the adoption of clean and eco-friendly technologies and industrial processes, achieving that all the countries take measures according to their respective capacities.

Goal 9.5: To increase the scientific research and to improve the technological capacity of the industrial sectors of all the countries, particularly the developing countries, among other things, by fostering the innovation and increasing remarkably, until 2030, the number of people working on research and development by millions of inhabitants and the expenditures of public and private sectors on R&D.

1.2. Context and importance of this course in the degree

Basic and mandatory training of the degree courses give priority to the learning of the functional areas of the company as production, finance, marketing, human resource management, accounting, etc. Therefore, aspects directly related to the generation and dissemination of innovations are set aside. Innovation management is key factor for business competitiveness. The subject is conceived to cover these training gaps by entering the student into the learning of main elements and tools for innovation management.

1.3. Recommendations to take this course

The course is available to any student interested in the understanding of the processes of generation and diffusion of innovations in the business field. Specific previous knowledge is not required but, it is recommended to have previously attended some basic and mandatory training in all areas of business management and economy. The methodology of teaching and learning recommends regular class attendance.

2. Learning goals

2.1. Competences

Specific competences:

S1- Business organisation and management.

S2- Carry out any management task in functional areas related to business innovation and technological change.

S3- To assess the situation, evolution and challenges in companies and organizations and how to extract the relevant knowledge related to innovation and technological change.

S4- Provide advice reports on markets, sectors, organisations and companies regarding to innovation and technological change.

S5- To understand and apply professional standards and scientific method to economic, business, and organizational problem solving.

Transversal competences:

T1- Problem solving skills.

T2- Organizational and planning skills.

T3- Ability to data collection and analysis.

T4- Ability to make decisions.

T5- Motivation to strive for quality and excellence.

T6- Ability to adapt to changing circumstances.

T7- Ability to put knowledge into practice.

2.2. Learning goals

The overall objective of the course is to train students of business management on the basics of innovation. Based on the premise that innovation is a fundamental element for business competitiveness, the innovation management process is essential to achieve strategic goals of the firm. The understanding of the innovation framework, the measurement needs and the links with other actors is essential for the management of the innovation process. In the same way it is necessary to identify the objectives, effects and impacts on performance, as well as the factors hindering innovation. Finally, the course provide training for skills acquisition to the proper internal management of innovation at the heart of the company, with particular emphasis both in the basic activities as in the available tools.

2.3. Importance of learning goals

Generation and diffusion of innovations are key factors for economic competitiveness. The subject extends the range of elements and specific tools for the proper management of innovation at the company in such a way that it positively impact both in private and social outcomes

3. Assessment (1st and 2nd call)

3.1. Assessment tasks (description of tasks, marking system and assessment criteria)

The student must demonstrate that he/she has achieved the learning objectives through the following evaluation activities:

First call, offers students two evaluation systems:

1. Ongoing evaluation of the student work from: i) their participation in class, ii) the resolution of practical cases studies submitted in writing (approximately between 8 and 10), and iii) delivery of teamwork on a final project in writing and its presentation. Each part: participation in class, delivered cases and final project; ponders a third in the final grade. To opt for this system of evaluation, the student must obtain a minimum score of 3 points out of 10 in an exam to be carried out at the end of the semester, either on the days authorized at the end of the semester for the performance of the continuous assessment tests, or in the last days of class. If the student received a score on this test superior to that obtained through the

assessment tests, or in the last days of class. If the student received a score on this test superior to that obtained through the weighted sum of the grades obtained from ongoing evaluation activities, it will prevail the exam note. The student who does not reach the minimum required in the continuous assessment tests, can not continue through this evaluation procedure.

2. Global assessment. Students who do not opt for ongoing evaluation or that does not exceed the minimum score (3 out of 10) or want to improve their qualification, shall be entitled to attend the global test, prevailing in any case the best of the grades obtained. This global test consists of a final exam in writing with theoretical / practical questions to demonstrate knowledge assimilation of the theoretical concepts and the application of the practical aspects seen in cases, readings, and examples. As a guideline, the theoretical part is between 50-60% of the note, and between 40-50% the practical one.

In **second call**, the assessment is done through a global exam consisting of a written test of the same characteristics as those identified for the final examination of first call

Assessment criteria:

In continuous assessment:

1. Continued participation in class and clever contributions to the topics proposed (it will be assessed from 0-10 and will be multiplied by 1/3 in order to compute the final note). The scoring system will be linear with the number of effective entries in such a way that if a student participates the half days gets five points out of 10. It shall be multiplied by 1/3 in order to compute the final score.

2. Preparation of case studies, analysis and management recommendations in writing, and discussion in class (1/3 of the final note). Written reports must be handed in on the designated dates. To obtain the maximum score, delivery in time and form of all reports is mandatory. The lack of a report penalizes 40%, two reports 80% and three or more 100%. For the computation of this part in the final score, the note of this paragraph (0-10 points) will be multiplied by 1/3.

3. Presentation in class and delivery in writing of the teamwork, up to three people (1/3 of the note). The work is scored 0-10 based on the content and presentation and multiply such a note to 1/3 with regard to the calculation of the final grade.

To be eligible for this system of evaluation, the student must obtain a minimum score of 3 points out of 10 in a final exam which will take place at the end of the semester. If the student got a score on this exam superior to that obtained from the sum of the three items outlined above, will always prevail the highest score.

This exam will have three or four questions, theoretical and practical questions where the student should demonstrate knowledge and assimilation of theoretical concepts, complementing the answers with application of practical issues discussed in cases, readings and examples. The theoretical part will be around 50 % and 60 % of the grade, and the practical part between a 40 % and a 50 % of the grade.

In the global test:

The grade in which the student has acquired expected outcomes of learning, through their answers to the questions about the basic concepts of the subject, worked in class and contained in the assigned readings and resolution of case studies.

These exams are expected to be taken in-classroom but if the sanitary circumstances require it, they will be hold semi-presential or on line. In case of on-line assessment, it is important to remark that, in any exam, the student could be recorded, being able to exercise their rights by the procedure indicated in:

https://protecciondatos.unizar.es/sites/protecciondatos.unizar.es/files/users/lopd/gdocencia_reducida.pdf"

The corresponding software will be used to check the originality of the activities. In case of detecting plagiarism in any activity the qualification will be 0 points.

4. Methodology, learning tasks, syllabus and resources

4.1. Methodological overview

The methodology followed in this course is oriented towards the achievement of the learning objectives. A wide range of teaching and learning tasks are implemented, such as theory sessions, practice sessions, laboratory sessions, tutorials and seminars.

Since this course is a fourth year course, it's taken for granted that students have taken most of the core courses and some of the elective ones, being also understood that the learning objective of knowing how to apply to real business situations what has already been learned has priority over the objective of learning new, additional concepts. This is why the learning process involves the discussion of case studies and the elaboration of a course project where students have the opportunity of learning by doing.

4.2. Learning tasks

This 5 ECTS course is organized as follows:

- **Theory sessions** (25 hours). The professor explains basic concepts for each topic, justifying their relevance and suggesting concepts and tools that are useful to solve case studies
- **Practice sessions** (25 hours). Case studies will be solved, cases that represent business situations that are complex and not structured, so the student have to identify the problem, possible ways to solve it, valuate them, and choose one or some of them defending his or her decision in class. In addition, there will be readings of academic papers and chapters that will complement the conceptual aspects of each topic presented by the professor. There will also be a team project in which students will analyze in a real organization the different concepts and issues learnt in class.
- **Autonomous work and study** (75 hours). Learning based on problems / Laboratory (ICT tools) / Seminars /

Tutorials / Personal work of the student

- **Tutorials**. The students will have the opportunity to attend individual tutorials.

In principle, the methodology applied for the teaching is expected to turn around in-person classes. However, if necessary for sanitary reasons, the in-person classes could be taught by semi-presential or on-line methods.

4.3. Syllabus

This course will address the following topics:

- **Topic 1. Innovation**
    1. Innovation: types, dimensions and sources
    2. The importance of innovation in business
    3. Models of innovation process
    4. The Challenge of discontinuous innovation
    5. Disruptive Technological Change.
- **Topic 2. Systems of Innovation and Data ? Oslo Manual**
    1. The OECD and the Oslo Manual
    2. Economics of Innovation
    3. A Measurement Framework
    4. Sectoral and Regional Aspects of Innovation
    5. Linkages in the Innovation Process
    6. Measuring Innovation Activities: the Components and Coverage.
    7. Objectives, Obstacles and Outcomes of Innovation
    8. Innovation Systems
    9. n-Tuple Helix Approach
- **Topic 3. Managing Innovation**
    1. Innovation as a Learning Process
    2. The Innovation Management
    3. Innovation Management Tools
    4. Protecting Innovation
    5. The Culture of Innovation
    6. Future technology trends

4.4. Course planning and calendar

Further information concerning the timetable, classroom, office hours, assessment dates and other details regarding this course, will be provided on the first day of class or please refer to the Moodle website (https://moddle2.unizar.es); Academic calendar website (https://academico.unizar.es/calendario-academico/calendario); or the website of your corresponding faculty (Zaragoza: https://econz.unizar.es/, Huesca: http://fegp.unizar.es/, Teruel: http://fcsh.unizar.es/).