

Academic Year/course: 2021/22

## 25898 - Product Management

### Syllabus Information

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**Academic Year:** 2021/22

**Subject:** 25898 - Product Management

**Faculty / School:** 110 - Escuela de Ingeniería y Arquitectura

**Degree:** 558 - Bachelor's Degree in Industrial Design and Product Development Engineering

**ECTS:** 6.0

**Year:** 4

**Semester:** First semester

**Subject Type:** Optional

**Module:**

## 1. General information

### 1.1. Aims of the course

In a globalized world like today, it is becoming more and more decisive when companies survive their ability to innovate in the development and launch of their products. This capacity for innovation is useless if it is not accompanied by proper management of these products and the development of their brands.

The subject aims to provide the theoretical and practical knowledge to do all this in an integrated manner. For this, it develops the strategy on the general management of the product, being therefore recommendable for those design engineers who wish to complete their training in business management in relation to innovation, development and launch of new products. For this purpose, the necessary knowledge is deepened in order to guarantee the successful launch of the products to the market and thus achieving the recognition of the company's brands. Its content is fundamentally practical, deepening in the strategic planning for the management and development of the product.

These approaches and objectives are aligned with some of the Sustainable Development Goals, SDGs, of the 2030 Agenda (<https://www.un.org/sustainabledevelopment/en/>) and certain specific goals, in such a way that the acquisition of the Learning outcomes of the subject provide training and competence to the student to contribute to a certain extent to their achievement:

- Objective 4: Ensure inclusive, equitable and quality education and promote lifelong learning opportunities for all.
  - Meta 4.7: By 2030, ensure that all students acquire the theoretical and practical knowledge necessary to promote sustainable development, including through education for sustainable development and sustainable lifestyles, human rights, equality of gender, the promotion of a culture of peace and non-violence, world citizenship and the appreciation of cultural diversity and the contribution of culture to sustainable development.
- Objective 12: Guarantee sustainable consumption and production patterns.
  - Meta 12.2: By 2030, achieve sustainable management and efficient use of natural resources.
- Objective 13: Take urgent measures to combat climate change and its effects.
  - Meta 13.3: Improve education, awareness, and human and institutional capacity regarding climate change mitigation, adaptation, reduction of its effects, and early warning.
- Objective 15: Sustainably manage forests, fight desertification, stop and reverse land degradation, and stop biodiversity loss.
  - Meta 15.1: By 2020, ensure the conservation, restoration and sustainable use of terrestrial ecosystems and inland freshwater ecosystems and the services they provide, in particular forests, wetlands, mountains and arid zones, in consistent with obligations under international agreements.
  - Meta 15.2: By 2020, promote the sustainable management of all types of forests, end deforestation, recover degraded forests, and increase afforestation and reforestation globally.

### 1.2. Context and importance of this course in the degree

The subject corresponds to the training in business matter of the degree, is optional with an allocation of 6 credits and is taught in the first four months corresponding to the intensification of Business Management Design. This subject completes the knowledge on product management already taught in the subjects of Economic and Business Aspects of Design, basic training taught in the second year, and Marketing Strategies and Legal Aspects of the Product, mandatory and taught in the third year. Although by internal organization is taught in the first semester and the student may not have completed the second semester of Marketing Strategies and Legal Aspects of the Product, this will not be a problem.

In the first of the subjects of the Company area taught in the degree such as Economic and Business Aspects of Design students in second year perform a module work together with the subjects of the semester consisting of the development of a product based on real market data. Specifically, in relation to Economic and Business Aspects of Design, students perform at least one strategic planning and study the viability of said product. The following year, in the third year, these same students can deepen their business knowledge by making a marketing plan in the mandatory subject of Marketing and Legal Aspects of the Product and can also continue to develop their knowledge of business with integral development of product management and the creation of value for the brand in the subject of Product Management.

### 1.3. Recommendations to take this course

It is a subject with high practical content that develops and deepens the knowledge already introduced in the subjects of the previous courses area. For this reason, it is recommended that students attend their sessions in person, especially in the presentation of contents, presentations and examples, being decisive for their correct assimilation, team work and active participation. Some examples of this practical work are the analysis of the management of the products of companies such as Sony, Apple, Mercedes, etc.

The practical part of the subject will culminate with the realization of a practical work tutored in group or individual where the student will have to develop at least one fundamental aspect of the strategic management of a concrete product and related to the design. In this work you must integrate all the necessary contents for it and previously developed in the subject.

For those students who exceptionally and always in a justified way, can not do it in person, an exam is planned.

## 2. Learning goals

### 2.1. Competences

In this subject the student acquires and develops the following competences:

CG03 - Ability to conceive and develop design projects, in the aspects related to the nature of products and services, their relationship with the market, the environments of use and the user, and attending to their manufacture, selection of materials and processes more suitable in each case considering relevant facets such as quality and product improvement.

CG02 - Ability to analyze and assess the social and environmental impact of technical solutions acting with ethics, professional responsibility and social commitment.

CG05 - Ability to obtain, manage, analyze and synthesize information from various sources for the development of design and product development projects. Use this documentation to obtain conclusions oriented to solve problems and make decisions with initiative, creativity and critical reasoning, generating new product concepts, new ideas and solutions.

CG07 - Ability to use and master the techniques, skills, computer tools, information and communication technologies and tools of design engineering necessary for the practice of it.

CG10 - Ability to plan, budget, organize, direct and control tasks, people and resources.

CB2 - That students know how to apply their knowledge to their work or vocation in a professional manner and have the skills that are usually demonstrated through the elaboration and defense of arguments and the resolution of problems within their area of study.

CB3 - That students have the ability to gather and interpret relevant data (usually within their area of study) to make judgments that include a reflection on relevant issues of social, scientific or ethical nature.

CB5 - That students have developed those learning skills necessary to undertake further studies with a high degree of autonomy.

CE20. Ability to adequately perform strategic planning, develop action plans and economic evaluation of design projects and product development in the context of the company.

CE21. Knowledge of the rights and obligations emanating from the legal sources of industrial and intellectual property, the registration of trademarks and patents, industrial design and product liability, its security and marking.

CE22. Knowledge of marketing strategies, range and product portfolio and markets, customer segmentation and positioning of the product and brand.

CG: Generic Competition. CB: Basic Competence. CE: Specific Competition.

### 2.2. Learning goals

The student, to overcome this subject, must demonstrate the following results:

1. It is capable of designing a differentiation plan from the strategic planning and launching the product to the market, using the tools of product management and appropriate brands.

2. Is able to adequately perform the strategic management of the product; develop the product policy, design the product portfolio of the company and perform the management of the brand.
3. Is able to find the necessary information, real and relevant from various sources, summarize this information and use it in the face of solving the real problem that is presented.
4. Is able to present in writing, in the form of a report, and orally, in the form of a presentation, the work done with special care in highlighting the main conclusions, always duly justified using the appropriate terminology.
5. Understands and knows how to develop the product cycle in the market, from its appearance, management, and substitution or disappearance.

### 2.3. Importance of learning goals

The design and product development engineer must know the principles of the operation of business management to make the most beneficial decisions for the organization in which he works and thus strengthen the value of their brands. In this subject these principles are taught and put into practice, as well as the necessary tools to do all this. The eminently practical approach of the subject, supported by real cases and data from highly relevant international companies, allows students to prepare for the world of work by developing the skills necessary for their professional performance .

## 3. Assessment (1st and 2nd call)

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

1st Test: Specific work of product management (0% or 50% of the final grade).

The note of the work of product management will mostly be obtained from the results obtained in the work presented in the final session, but will also take into account the evolution of this work and active participation in the authorized sessions held on this work.

The group student can carry out this work individually or in small groups on one or several aspects related to the management of the product. It must be about a real product and based on real data that must be obtained by itself. This can be proposed by the teacher or by the students, needing in the latter case the approval of the first. This work must be defended in public before the end of the course.

In the case of not doing this work, the student will concentrate this evaluation on the written exam.

2nd Test: Continuous evaluation (0% or 50% of the final grade).

This note will be obtained mainly from the evolution of the student in the theoretical or practical classes, especially in the resolution of small practical cases about real products of current world leading companies that will be solved individually or in groups, mainly in class.

In the case of not passing this continuous evaluation, the student will concentrate this evaluation on the written exam.

3rd Test: Written exam (0% if the previous two tests have been passed, 50% if only one or 100% has been passed if none of the final grade has been passed as appropriate).

The exam will have to go to the student in the case of not passing the specific work and / or the continuous evaluation.

This test of approximately 1.5 hours, will consist of a theoretical part of the test type on the knowledge seen in class that will represent 40% of the grade and a practical part consisting in the resolution of similar cases to those solved in class that it will mean 60% of the grade.

Determinants

The grade obtained in each of the three previous sections is saved during the current course, but not for later courses.

It is necessary to approve two of the three previous parts of the subject to be able to mediate the final grade and therefore pass the subject.

Note: Following the regulations of the University of Zaragoza in this regard, in subjects that have continuous or gradual assessment systems, a global assessment test will also be scheduled for those students who decide to opt for this second system.

## 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. It is based on active participation, case studies, teamwork, etc., which favors the development of communication skills and critical thinking. A wide range of teaching and learning tasks are implemented, such as l, practical activities, practice sessions, autonomous work, tutorials and academic guidance. More information about the course will be provided on the first day of class.

### 4.2. Learning tasks

The course includes 6 ECTS organized according to:

- Conferences (1.2 ECTS): 30 hours. The professor presents theoretical contents on which a practical case is later developed.
- Practices (1.2 ECTS): 30 hours. Can include discussion and presentation of case studies, practical work outside the classroom (fieldwork or visits) and seminars.
- Guided tasks (0.3 ECTS): 7.5 hours. Students will complete assignments, problems and exercises related to concepts seen in laboratory sessions and conferences. They will be presented at the beginning of each practice session to be discussed and analyzed. If assignments are presented later, students will not be able to take the assessment test.

- Autonomous work (3 ECTS): 75 hours. Students perform tasks such as self-study, reading cases, preparation of practice sessions and seminars.
- Tutorials (0.2 ECTS): 5 hours. The teachers' work hours can be used to answer questions and to follow up on the work of the students.
- Evaluation (0.1 ECTS): 2.5 hours. Final exam or alternative evaluation.

More information about the course will be provided on the first day of class.

### 4.3. Syllabus

The course will address the following topics:

First Part: Product strategy management (1st to 10th week)

1. Current approach to business competitiveness.
  - ? Product strategy - market - technology.
  - ? Innovation and differentiation as competitive advantages.
2. Identification of market opportunities.
  - ? Diagnostic and management tools.
  - ? Product portfolio. Spectrum.
  - ? Product policy.
  - ? Launch of products to the market.

Second part: Brand management (11th to 14th week)

3. Advertising and corporate social responsibility.
  - ? Management of advertising and promotion campaigns.
  - ? The audiovisual product in business management.
4. Brand image and cultural reflexes.
5. Brand design, structure, and values.

Third part: Delivery and presentation of the Product Management Work (week 15th).

### 4.4. Course planning and calendar

The student has 4 hours of class per week during the 15 weeks of the semester. For more information about the schedule, the classroom and more information about this course, consult the website of the School of Engineering and Architecture (<https://eina.unizar.es/>).

Before the 4th week of the semester, students must select both the product and the fundamental aspects related to their management of which they will develop the supervised work. This selection will be communicated to the professor responsible for the subject who must give his approval. After this selection students will make first exposure to the teacher. Before the 9th week of the semester, the person in charge of the subject must be presented by the development of the strategic approach to the management of the product that is the object of the work on that date. Before the 15th week, the work finally developed must be submitted and presented to proceed with its final evaluation.

### 4.5. Bibliography and recommended resources

<http://psfunizar7.unizar.es/br13/egAsignaturas.php?codigo=25898&Codcentro=110>