29699 - Prospective design

Syllabus Information

Academic Year: 2019/20
Subject: 29699 - Prospective design
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

1.2.Context and importance of this course in the degree

1.3.Recommendations to take this course

2.Learning goals

2.1.Competences

CB05. Students have developed those skills needed to undertake further studies with a high degree of autonomy.

GC04. Ability to organize time effectively and coordinate activities to acquire new knowledge quickly and perform under pressure.

GC05. Capacity to collect, manage, analyze and synthesize information from various sources for the development of design projects and product development. Capacity to use this documentation to obtain conclusions aimed at solving problems and making decisions with initiative, creativity and critical thinking, in order to generate new product concepts, new ideas and solutions.

GC08. Ability to learn continuously, to develop autonomous learning strategies and to work in multidisciplinary groups with motivation and determination to achieve goals.

SC12. Ability to perform a generic approach of a design process, to structure it in stages, apply a methodology and select the design strategy.

SC13. Ability to understand the creative process, its phases and relationship with industrial design. Capacity to understand and apply divergent and convergent processes in design methodologies, similar to those of the creative process and develop the capacity for conceptualization.

SC15. Capacity to develop product concepts, in relation to the set of services, benefits, and intangible values linked, understanding the importance of service design.
BASIC COMPETENCES (CB);GENERAL COMPETENCES (GC); SPECIFIC COMPETENCES (SC).

2.2.Learning goals

2.3.Importance of learning goals

3.Assessment (1st and 2nd call)

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

4.Methodology, learning tasks, syllabus and resources

4.1.Methodological overview

The learning process that has been designed for this subject is based on the following:

In the course, some theoretical topics will be developed that will serve for the learning of definitions, terminology or techniques of work and for the revision of cases, by means of exposition of content with presentations and examples.

However, the focus of the subject will consist of exercises in the classroom and on behalf of the student, tutorial sessions of project monitoring and evaluation of the achievements and partial and general objectives.

Practical classes can consist of several simple exercises for individual or couples work and a project for collective development; the topics may be related to other subjects that are developed in the same semester so that the research and problem-solving part is applicable to the rest of the student's exercises and projects.

The evaluation will be continuous, and will be based on the satisfaction of the objectives set forth in the proposed project and exercises, through the evaluation of different sections within the same exercise or project.

4.2.Learning tasks

The course includes the following learning tasks:

Theory sessions will deal, among others, with the following aspects: Innovation, R + D + i, technological watch, knowledge management, prospection, and future environments.

In the theoretical classes, the topics and cases are discussed and small argumentations are made about the products analyzed in relation to the topic seen.

Practice sessions are developed by means of simple experimental and conceptual exercises for individual work. The project is collective work and we will apply the methodology seen in the theoretical part.

Distribution of learning activities will be as follows:
6 credits ECTS: 150 horas / student

- 30 h. Lecture/Theory session (large group sessions)
- 30 h. Practice session (15 sesssios)
- 15 h. Autonomous study
- 70 h. Autonomous work
- 5 h. Assessment

4.3.Syllabus

The course will address the following learning tasks:

- Concept of innovation, technological innovation, prospective and prospective technology.
- Research, development and Innovation (R + D + I).
- Application of innovation to the process of product development, generation of new product concepts.
- Research in innovation.
- State of the art
- Concept of the prospective and technological watch.
- Concepts of knowledge management and competitive intelligence.
- General methods of prospective, techniques.
- Specific regulations for the management system of R & D & I activities.

4.4.Course planning and calendar

4.5.Bibliography and recommended resources