

25825 - Design Research

Información del Plan Docente

Academic Year	2017/18
Faculty / School	110 - Escuela de Ingeniería y Arquitectura
Degree	271 - Bachelor's Degree in Industrial Design and Product Development Engineering
ECTS	7.5
Year	
Semester	First Four-month period
Subject Type	Optional
Module	---

1.General information

1.1.Introduction

1.2.Recommendations to take this course

1.3.Context and importance of this course in the degree

1.4.Activities and key dates

2.Learning goals

2.1.Learning goals

2.2.Importance of learning goals

3.Aims of the course and competences

3.1.Aims of the course

3.2.Competences

4.Assessment (1st and 2nd call)

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

5.Methodology, learning tasks, syllabus and resources

5.1.Methodological overview

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

In the course some theoretical subjects (3 ECTS) which will serve for learning definitions, terminology or technical work and for reviewing cases by exposure of content with presentations and examples will be developed. However, the bulk of the course will consist of exercises in the classroom and on behalf of the student, tutored sessions monitoring and evaluation of project achievements and partial and general objectives of attainment.

Practical classes will consist of several simple exercises for individual work and project for collective work, the issues may be related to work of other subjects that are developed in the same quarter so that the share of research and problem solving is applicable to other exercises and student projects (4.5 ECTS).

The evaluation will be continuous and will be based on meeting the objectives set out in proposed projects and exercises, through the evaluation of different sections within the exercise itself or project.

5.2.Learning tasks

The program that the student is offered to help you achieve the expected results includes the following activities

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The lectures addressed, among others, the following: Innovation, technology watch, knowledge management, prospecting and future scenarios. In the theoretical classes cases are discussed and analyzed, debates about products and objects seen regarding the issue are made.

The practical classes are developed through simple exercises for experimental and conceptual individual work: The project is collective work and methodology seen in the theoretical part is applied.

7.5 ECTS: 187.5 hours / student distributed as follows:

- 30 h. whole group class: theory and problems (15 classes 2 contact hours) Type 1
- 45 h. Practice class (15 sessions of 3 contact hours) Type 2
- 15 h. theoretical study
- 90 h. practical work
- 7.5 h. examination and presentation of projects

5.3.Syllabus

The lectures addressed, among others, the following:

- Concept of innovation, technological innovation, technology watch / foresight. Research, Development and Innovation (R + D + I).
- Applying innovation to the process of product development, generating new product concepts.
- Research in innovation. State of the art.
- Concept of technology watch.
- Concepts of knowledge management and competitive intelligence
- Specific regulations for the management system of R + D + I.

5.4.Course planning and calendar

Calendar of Theoretical and practical sessions

semana 1	TEORÍA PRESENTACIÓN DE ASIGNATURA	ACTIVIDAD PRÁCTICAS INICIO EJERCICIOS CONCEPTUALIZACIÓN
semana 2	CONCEPTUALIZACIÓN	EJERCICIO CONCEPTUALIZACIÓN FORMAL
semana 3	CONCEPTUALIZACIÓN,	EJERCICIO

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	EJEMPLOS	CONCEPTUALIZACIÓN
semana 4	VIGILANCIA TECNOLÓGICA	FORMAL EJERCICIO CONCEPTUALIZACIÓN
semana 5	VIGILANCIA TECNOLÓGICA	FUNCIONAL EJERCICIO CONCEPTUALIZACIÓN
semana 6	GESTIÓN DEL CONOCIMIENTO E INTELIGENCIA	FUNCIONAL PRESENTACIÓN Y ENTREGA EJERCICIOS CONCEPTUALIZACIÓN
semana 7	BUSQUEDA DE INFORMACIÓN	SUBIR A MOODLE INICIO TRABAJO
semana 8	PROSPECTIVA	VIGILANCIA INICIO PROYECTO INNOVACIÓN-PROSPECTIVA
semana 9	PROSPECTIVA	TRABAJO VIGILANCIA
semana 10	HERRAMIENTAS	PROYECTO
semana 11	PROSPECTIVA INNOVACIÓN	INNOVACIÓN-PROSPECTIVA PROYECTO
semana 12	INNOVACIÓN	INNOVACIÓN-PROSPECTIVA TRABAJO VIGILANCIA
semana 13	INNOVACIÓN EJEMPLOS	PROYECTO
semana 14	INNOVACIÓN EJEMPLOS	INNOVACIÓN-PROSPECTIVA PROYECTO
semana 15	GESTIÓN DE LA INNOVACIÓN	INNOVACIÓN-PROSPECTIVA PRESENTACIÓN PREVIA PROYECTO DE INNOVACIÓN-PROSPECTIVA

5.5. Bibliography and recommended resources

- Godet, Michel. De la anticipación a la acción: manual de prospectiva y estrategia Marcombo, Barcelona, 1993
- Montaña, Jordi. Diseño y estrategia de producto Fundación BCD, Barcelona 1985
- French, M. J. Conceptual design for engineers / M. J. French . 3rd ed. London : Springer, cop. 1999
- Diseño industrial y su gestión en la PYME española : diez casos reales / Pere Escorsa Castells, ed.; Emil Herbolzheimer, ed.; Francesc Solé Parellada, ed. ; con la colaboración de la Escuela Superior de Administración y Dirección de Empresas Barcelona : Edicions UPC, 1995
- Thackara, John. In the bubble : designing in a complex world / John Thackara. - 1st ed. Cambridge, Massachusetts : MIT Press, 2006