

62954 - Design enhancement through quality techniques

Información del Plan Docente

Academic Year	2016/17
Academic center	110 - Escuela de Ingeniería y Arquitectura
Degree	562 - Master's in Product Development Engineering
ECTS	4.5
Course	1
Period	Second semester
Subject Type	Optional
Module	---

1.Basic info

1.1.Recommendations to take this course

1.2.Activities and key dates for the course

2.Initiation

2.1.Learning outcomes that define the subject

2.2.Introduction

3.Context and competences

3.1.Goals

3.2.Context and meaning of the subject in the degree

3.3.Competences

3.4.Importance of learning outcomes

4.Evaluation

5.Activities and resources

5.1.General methodological presentation

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

Each block has a learning task based on the analysis and discussion of some theoretical contents and obtaining conclusions, worked in the theoretical class with the whole group. Students should be able subsequently to apply the knowledge obtained to the analysis of existing cases.

The aim of the learning process is that the student possesses the knowledge and understanding that provide a basis or

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opportunity for originality in developing and / or applying ideas, often in a research context; they can apply their knowledge and their ability to solve problems in new or unfamiliar environments within broader (or multidisciplinary) contexts related to their field of study; they have the ability to integrate knowledge and handle complexity, and formulate judgments based on information that being incomplete or limited, includes reflections on social and ethical responsibilities linked to the application of their knowledge and judgments; communicate their conclusions and the knowledge and rationale underpinning to specialists and non-specialists in a clear and unambiguous way; and possess the learning skills that enable them to continue studying in a way that will be largely self-directed or autonomous. All these aspects belong to the general competences of the title, but, in particular, the aim of this subject is that the student acquires the ability to implement techniques and Quality methods during the stages of design and development of product life-cycle management, aspect of great importance in the world in which we live.

5.2.Learning activities

The lectures are raised with a structure of exposure and participatory debate , and drawing conclusions . Different conceptual principles, methodologies and tools to capture information will be timely presented to analyze the design in the social context.

Details of the characteristics of different practical exercises will be provided in class.

5.3.Program

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

The course works the following contents:

* Introduction to improvement. Lean Manufacturing. Kaizen. Tools for improvement and problem solving: Reengineering, PDCA, 7 + 7 tools.

* Tools for Control: Design Review (quality audits).

* Planning tools Quality: Benchmarking, Value analysis, functional analysis - FAST, QFD, FMEA and Fault Tree.

* DOE, Definition Statistical of Tolerances, Analysis of durability and reliability.

The lectures are planned with a structure of exposure and participatory debate, and drawing conclusions. Different conceptual principles, methodologies and tools to capture information to analyze the design in the social context will be presented in the lectures.

Details of the characteristics of different practical exercises will be provided in class.

5.4.Planning and scheduling

5.5.Bibliography and recommended resources