25830 - Advanced Computer-Assisted Design

Información del Plan Docente

Academic Year	2016/17
Academic center	110 - Escuela de Ingeniería y Arquitectura
Degree	271 - Bachelor's Degree in Industrial Design and Product Development Engineering
ECTS	5.0
Course	
Period	Second Four-month period
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

Methodological overview

The learning process that has been designed for his subject is based on...

25830 - Advanced Computer-Assisted Design

The teaching process will develop on two main levels: laboratory labs and tracking on tutored assignments, with increasing level of student participation.

In the laboratory labs, the concepts and examples of application where the student will handle the necessary Software for Computer-aided Design for the implementation of the proposed exercises will be showcased.

The tutored practices will be the follow-up of proposed exercises, individually, through compulsory appointment at the office.

5.2.Learning activities

Scheduled learning activities:

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

Teaching type 1 and 3: master classes (1 h/week) at the computer lab and targeted computer practices (2 h/week).

They are taught in a single group. In them and on the computer are applied in each of the modules contents are taught. The teacher shows a practical application of the most important concepts that students must adapt and apply to their corresponding work.

Teaching type 6: supervised practical work.

The teacher keeps track of the development of the assignments, give indications for the following stages and supervises the level of learning of each of the students.

Depending on the number of students, such monitoring may be carried out in small groups or individually

teaching type 7: personal study. Individual dedication necessary to consolidate a proper learning process.

Other activities: tutoring. Direct attention to the student for reference.

25830 - Advanced Computer-Assisted Design

5.3.Program

Advanced CAD: content of the subject

1. Non-parametric advanced modeling techniques

1.1. Advanced modeling of curves and surfaces NURBS:

- Introduction to quality of curves and surfaces, classification. Continuity concept.
- Generation and advanced editing curves and NURBS surfaces
- Analysis and reconstruction of NURBS surfaces and curves
- Realization of practical cases

1.2. Non-parametric complementary techniques

2. Parametric advanced modeling techniques.

2.1 Intensification of the parameterization. Equations and parameters

2.2. Parametric design through surfaces.

2.3 advanced operations on the design of parts and assemblies

2.4. Advanced relations position and movement

2.5. Configurations of parts and assemblies

2.6. Design of parts and assemblies by linking to tables

5.4.Planning and scheduling

Advanced CAD: Calendar of presential sessions and paper presentations

The practical sessions in the laboratory are taught according to the schedule established by the Center and is published prior to the starting date of the course on the website of the Centre and in bulletin boards.

Each teacher will inform the students about their tutoring hours.

The other activities will be planned according to the number of students and will be announced in advance.

5.5.Bibliography and recomended resources

Advanced CAD: Bibliography, materials and resources.

Enrolled students will have on line access from the beginning of the subject through the corresponding course moodle-unizar to the relevant information for the monitoring of the subject:

Advanced CAD (grade Eng. Design I D P)

- Program, structure and content of the subject.
- Schedules
- Criteria of evaluation
- Chronological planning and content of sessions.
- Documentation of the subject.
- Notes from the subject.
- Statements of problems and work.
- Bibliography of the reference to the contents of the subject
- **Data of teachers as hours of tutorials, etc.**