

69304 - Computer aided prosthesis and implant design

Información del Plan Docente

Academic Year	2016/17
Academic center	110 - Escuela de Ingeniería y Arquitectura
Degree	547 - Master's in Biomedical Engineering
ECTS	3.0
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 teaching methodology is structured in three levels: theoretical classes where the main subject contents are presented and discussed, student participation is encouraged; also computer lab sessions and development of practical tasks based on a real application or specific research activity are proposed.

5.2.Learning activities

There will be the following activities:

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A01 Theoretical classes with the active involvement of the student (18 hours). The main course contents are presented.

A03 Computer/lab sessions (10 hours). Different lab sessions are carried out. Notes for each computer/lab session where the different activities are planned will be available before the session. In the following days after the computer/lab session, the student should present a report of the corresponding lab session.

A05 Development of practical tasks. Different activities/tasks are proposed related with the main contents of the course

A06 Tutorship. Students may solve any questions they might have about unclear contents of the course

A08 Assessment. The student will take an exam and several reports derived from the computer lab sessions and derived from the development of practical tasks will be evaluated

Activities A05, A08 and student personal study-time will account with 45 hours

5.3.Program

The course program will be:

1. Introduction
2. Design factors
3. Hip implants
4. Knee implants
5. Dental implants
6. Foot implants
7. Spine prosthesis
8. Cardiovascular prosthesis
9. Prostheses/Implants regulations

5.4.Planning and scheduling

The course calendar is defined by the Escuela de Ingeniería y Arquitectura calendar. Every computer/lab session will be announced in advance through Moodle.

5.5.Bibliography and recommended resources

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| BB | Biomecánica de la fractura ósea y técnicas de reparación. Ed. Instituto de Biomecánica de Valencia |
| BC | Munuera Martínez, Luis. Introducción a la traumatología y cirugía ortopédica / Luis. Munuera ; colaboradores, E. Gil Garay ... [et al.]. - [1ª ed., 1ª reimpr.] Madrid [etc.] : McGraw-Hill- Interamericana, 1999 |