Universidad Zaragoza

Academic Year/course: 2022/23

67244 - Biomedical electronic technology

Syllabus Information

Academic Year: 2022/23
Subject: 67244 - Biomedical electronic technology
Faculty / School: 110 - Escuela de Ingeniería y Arquitectura
Degree: 622 - Master's in Electronic Engineering
ECTS: 6.0
Year: 1
Semester: First semester
Subject Type: Optional
Module:

1. General information

2. Learning goals

3. Assessment (1st and 2nd call)

4. Methodology, learning tasks, syllabus and resources

4.1. Methodological overview

The methodology followed in this course is oriented towards achievement of the learning objectives. A wide range of teaching and learning tasks are implemented, such as lectures, problem-solving, case studies, laboratory sessions, homework, assignments, and oral presentations.

4.2. Learning tasks

The course includes the following learning tasks:

- **Lectures** (20 hours).
- **Practice sessions** (10 hours).
- **Laboratory sessions** (9 hours).
- **Special sessions** (6 hours).
- **Student homework** (39 hours).
- **Autonomous work and study** (60 hours).
- **Evaluation tests** (6 hours).

4.3. Syllabus

The course will address the following topics:

BASIC CONCEPTS OF BIOMEDICAL ELECTRONIC INSTRUMENTATION

- Overview and applications.
- Electrophysiological fundamentals.
- Electronic systems for medical diagnosis and therapy.

ELECTROSURGICAL TECHNOLOGY AND APPLICATION TO CANCER TREATMENT

- Introduction to electrosurgery.
- Electrosurgical systems.
- Radiofrequency and microwave application.
- Electroporation application.

4.4. Course planning and calendar

Further information concerning the timetable, classroom, office hours, assessment dates and other details regarding this course, will be provided on the first day of class or please refer to the EINA website.