67235 - Resonant electronic converters

Syllabus Information

Academic Year: 2019/20
Subject: 67235 - Resonant electronic converters
Faculty / School: 110 -

Degree: 527 - Master's in Electronic Engineering

ECTS: 6.0
Year: 1
Semester: First semester
Subject Type: Optional
Module: ---

1.General information

1.1.Aims of the course

1.2.Context and importance of this course in the degree

1.3.Recommendations to take this course

2.Learning goals

2.1.Competences

2.2.Learning goals

2.3.Importance of learning goals

3.Assessment (1st and 2nd call)

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

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, in which the theoretical contents are explained.
- Practice sessions, in which representative problems and cases are solved.
- Laboratory sessions and related homework, where computer simulations and experimental setups are performed, and the results are reported.
- Student oral presentations.

4.2.Learning tasks

The course includes the following learning tasks:

- **Lectures** (about 20 hours)
- **Practice sessions** (about 10 hours)
- **Laboratory sessions** (about 15 hours)

- **Autonomous work** (about 40 hours, including 4 tutorial hours)
- **Study** (about 63 hours)
- **Evaluation tests** (about 2 hours)

4.3.Syllabus

The course will address the following topics:

Topic 1. Introduction and applications.

Topic 2. Resonant circuits.

Topic 3. Full-bridge and half-bridge resonant converters.

Topic 4. Single-switch resonant converters.

Topic 5. Modeling of resonant converters.

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.

4.5.Bibliography and recommended resources

http://biblos.unizar.es/br/br_citas.php?codigo=67235&year=2019