60838 - Resonant electronic converters

Syllabus Information

Academic Year:	2018/19
Subject:	60838 - Resonant electronic converters
Faculty / School:	110 -
Degree:	532 - Master's in Industrial Engineering
ECTS:	6.0
Year:	2
Semester:	First semester
Subject Type:	Optional
Module:	---

General information

Aims of the course

Context and importance of this course in the degree

Recommendations to take this course

Learning goals

Competences

Learning goals

Importance of learning goals

Assessment (1st and 2nd call)

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

Methodology, learning tasks, syllabus and resources

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, practice sessions, problem-solving, case studies, laboratory sessions, homework, assignments, and oral presentations.

Learning tasks

The course includes the following learning tasks:

- **Lectures** (20 hours). Explanation of theoretical contents.
- **Practice sessions** (10 hours). Problem-solving and case studies.
- **Laboratory sessions** (15 hours). Computer simulations and experimental setups are carried out, and the results are reported.
- **Assignments and homework** (40 hours, including 4 tutorial hours)
- **Autonomous work and study** (63 hours)
- **Assessment tests** (2 hours)

Syllabus

The course will address the following topics:

1. Introduction and applications.
2. Resonant circuits.
3. Full-bridge and half-bridge resonant converters.
4. Single-switch resonant converters.
5. Modeling of resonant converters.

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.

Bibliography and recommended resources