

Academic Year: (2019 / 2020)

Review date: 13/12/2019 14:34:02

Department assigned to the subject: Electronic Technology Department

Coordinating teacher: PEREZ GARCILOPEZ, ANTONIA ISABEL

Type: Compulsory ECTS Credits : 6.0

Year : 3 Semester : 1

REQUIREMENTS (SUBJECTS THAT ARE ASSUMED TO BE KNOWN)

- Electrical Power Engineering Fundamentals (2nd year 1st term)
- Fundamentals on Electronics Engineering (2nd year 2nd term)

OBJECTIVES

By the end of this content area, students will be able:

1. A systematic understanding of the key aspects and concepts of their branch of engineering in analog electronics
2. Coherent knowledge of their branch of engineering including some at the forefront of the branch in analog electronics
3. The ability to apply their knowledge and understanding of analog electronics to identify, formulate and solve engineering problems using established methods
4. The ability to apply their knowledge and understanding to develop and realise designs to meet defined and specified requirements
5. An understanding of design methodologies, and an ability to use them
6. Workshop and laboratory skills
7. The ability to select and use appropriate equipment, tools and methods
8. The ability to combine theory and practice to solve problems of analog electronics
9. An understanding of applicable techniques and methods in analog electronics, and of their limitations

DESCRIPTION OF CONTENTS: PROGRAMME

Negative Feedback Amplifiers. Setups and parameters.
Frequency response in feedback amplifiers. Stability and compensation.
Linear and non-linear oscillators. Timer circuits and pulse generators.
PLLs and VCOs.
Active filters.
Real effects in amplifiers.
Some specific purpose Integrated circuits.
Power amplifiers.
Linear and regulated power suppliers.
Computer simulation of analog circuits.

LEARNING ACTIVITIES AND METHODOLOGY

The teaching methodology will include:

- Magisterial Classes, where the students will be presented with the basic knowledge they must acquire. Students will be supplied with lecture notes and key reference texts which will enable them to complete and acquire a more in depth knowledge of the subject.
- Problems Classes, these are aimed at the solving of exercises and examples within the context of real case studies. These classes will be complemented with the resolution of practical exercises on behalf of the student.
- Laboratory Practical Sessions
- Group tutorials

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ASSESSMENT SYSTEM

% end-of-term-examination/test:	60
% of continuous assessment (assignments, laboratory, practicals...):	40

FINAL EXAM. Global assessment of knowledge, skills and capacities acquired throughout the course.

CONTINUOUS ASSESSMENT. Assesses papers, projects, class presentations, debates, exercises, internships and workshops throughout the course.