# uc3m Universidad Carlos III de Madrid

## **Bachelor Thesis**

Academic Year: (2019 / 2020) Review date: 05/05/2020 11:33:29

Department assigned to the subject: Electronic Technology Department

Coordinating teacher: CONTRERAS LALLANA, PEDRO

Type: Bachelor Thesis ECTS Credits: 12.0

Year : XX Semester :

## REQUIREMENTS (SUBJECTS THAT ARE ASSUMED TO BE KNOWN)

Those required by the University in relation to the conditions to start the Bachelor Thesis

#### **OBJECTIVES**

The aim of this course is for students to acquire knowledge and skills in the global aspects of Electrical Engineering, using technical and professional aspects. The student will make an individual project of a professional nature to synthesize and integrate the skills acquired in his/her engineering studies. The work must be defended in front of a board of examiners.

#### LEARNING OUTCOMES:

- 1. A systematic understanding of the key aspects and concepts of their branch of engineering;
- 2. The ability to apply their knowledge and understanding to identify, formulate and solve engineering problems using established methods;
- 3. An understanding of design methodologies, and an ability to use them.
- 4. The ability to conduct searches of literature, and to use data bases and other sources of information;
- 5. The ability to select and use appropriate equipment, tools and methods;
- 6. An understanding of applicable techniques and methods, and of their limitations;
- 7. An awareness of the non-technical implications of engineering practice.
- 8. Use diverse methods to communicate effectively with the engineering community and with society at large;
- 9. Demonstrate awareness of the health, safety and legal issues and responsibilities of engineering practice, the impact of engineering solutions in a societal and environmental context, and commit to professional ethics, responsibilities and norms of engineering practice;
- Recognise the need for, and have the ability to engage in independent, life-long learning.

# **DESCRIPTION OF CONTENTS: PROGRAMME**

- 1. The Bachelor Thesis
- 2. Presentation of working topics
- 3. How to carry on the Bachelor Thesis: contents, memory and presentation
- 4. Planning and project management
- 5. Project Budgeting

# LEARNING ACTIVITIES AND METHODOLOGY

- Lectures (0,5 ECTS credits)
- \* Lectures are oriented to acquire specific skills in solving engineering problems, especially those related with common knowledge and specific techniques related to electrical engineering.
- Tutorials and group work (1 ECTS).

- Personal work (10.5 ECTS).
- \* Aimed especially to the realization of the Bachelor Thesis.

## ASSESSMENT SYSTEM

The formative evaluation will be conducted by a committee that will assess the Bachelor Final Project of each student individually. The student will defend his Project before this committee in an oral session, clearly presenting the corresponding points with resolution of any problems arising in the Project. The student will also elaborate a document detailing his work. This document will be submitted to the committee in advance. The final grade of the student will take into account all these aspects. A rubric (public evaluation matrix) will be used to evaluate the different aspects of the Bachelor, s Final Project. This formative evaluation will constitute 100% of the student; s final grade.

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