

Academic Year: ( 2024 / 2025 )

Review date: 22-12-2023

Department assigned to the subject: Bioengineering Department, Signal and Communications Theory Department

Coordinating teacher: GOMEZ VERDEJO, VANESSA

Type: Master Final Project ECTS Credits : 12.0

Year : 1 Semester : 2

## OBJECTIVES

### Basic competences

CB6 Having and understanding the knowledge that provides a basis or opportunity to be original in the development and/or application of ideas, often in a research context

CB7 Students know how to apply their acquired knowledge and problem-solving skills in new or unfamiliar settings within broader (or multidisciplinary) contexts related to their field of study.

CB8 Students are able to integrate knowledge and to face the complexity of making judgments based on information that, being incomplete or limited, includes reflections on the social and ethical responsibilities linked to the application of their knowledge and judgments.

CB9 Students know how to communicate their conclusions and the knowledge and ultimate reasons behind them to specialised and non-specialised audiences in a clear and unambiguous way.

CB10 Students have the learning skills that will enable them to continue studying in a way that will be largely self-directed or autonomous.

### General competences

CG2 Ability to apply the knowledge of skills and research methods related to engineering.

CG3 Ability to apply the knowledge of research skills and methods related to Life Sciences.

CG4 Ability to contribute to the widening of the frontiers of knowledge through an original research, part of which merits publication referenced at an international level.

CG5 Ability to perform a critical analysis and an evaluation and synthesis of new and complex ideas.

CG6 Ability to communicate with the academic and scientific community and with society in general about their fields of knowledge in the modes and languages commonly used in their international scientific community.

### Specific competences

CE10 Ability to know fundamental concepts of the scientific method, as well as its ethical implications.

CE11 Being able to elaborate, present and defend adequately in public an original and rigorous Master's Degree Final Paper, related to one or some of the subjects of the degree, individually and before a court of law.

## DESCRIPTION OF CONTENTS: PROGRAMME

### Master Thesis

Fundamentals of the scientific method and its ethical implications

Hypothesis formulation and experimental design

Evaluation of the validity and significance with respect with the state of the art

Mechanisms for dissemination and transfer of research results

Application of techniques and knowledge acquired throughout the master to a specific problem or research challenge.  
Deep analysis of advanced novel methods.  
Results and conclusions presentation.

#### LEARNING ACTIVITIES AND METHODOLOGY

AF3 Theoretical practical classes  
AF4 Laboratory practices  
AF5 Tutorials  
AF6 Team work  
AF7 Student individual work  
AF8 Partial and final exams

#### ASSESSMENT SYSTEM

SE1 Participation in class  
SE2 Individual or team works made during the course  
SE3 Final exam  
SE4 Presentation and public defense of the TFM

Evaluation systems	Minimum weighting (%)	Maximum weighting (%)
SE1	0%	10%
SE2	0%	25%
SE3	0%	25%
SE4	75%	75%