uc3m Universidad Carlos III de Madrid

Master Thesis

Academic Year: (2022/2023)

Department assigned to the subject: 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 Review date: 07-10-2022

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

Activity code	total hours number	presencial hours number	% Student Presence
F3	16	16	100%
AF4	5	5	100%
AF5	13	10	77%
AF6	15	0	0%
AF7	249	0	0%
AF8	2	2	100%
SUBJECT TC	0TAL 300	33	11%

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	75%	25%
SE4	75%	75%