Teaching Guide					
Identifying Data					2022/23
Subject (*)	Project			Code	610441023
Study programme	Máster Universitario en Bioloxía Molecular, Celular e Xenética				
Descriptors					
Cycle	Period	Year		Type	Credits
Official Master's Degree	Yearly	First		Obligatory	12
Language	SpanishFrenchGalicianEnglish				
Teaching method	Face-to-face				
Prerequisites					
Department	BioloxíaCiencias da Computación e Tecnoloxías da InformaciónFisioterapia, Medicina e Ciencias BiomédicasPsicoloxía				
Coordinador	Cerdan Villanueva, Maria Esperanza		E-mail	esper.cerdan@udc.es	
Lecturers	Cerdan Villanueva, Maria Esperanza		E-mail	esper.cerdan@udc.es	
Web	http://ciencias.udc.es/MBMCG/				
General description	Coordination: María Esperanza Cerdán Villanueva It is an individual work carried out by the student under the direction of one of the professors of the Master and in which he will approach research in one of the thematic areas of the Master. The offer of experimental works by the teachers is updated each course and the list of topics for the TFM realization is published on the WEB in June of the previous course				

Study programme competences / results	
Code	Study programme competences / results
A1	Skills of working in a sure way in the laboratories knowing operation handbooks and actions to avoid incidents of risk.
A2	Skills of using usual techniques and instruments in the cellular, biological and molecular research: that are able to use techniques and instruments as well as understanding potentials of their uses and applications.
A3	Skills of understanding the functioning of cells through the structural organization, biochemistry, gene expression and genetic variability.
A8	Skills of having an integrated view of the previously acquired knowledge about Molecular and Cellular Biology and Genetics, with an interdisciplinary approach and experimental work.
A13	Skills to become a professional in health, pharmacy, veterinary, animal production, biotechnology or food sectors.
B1	Analysis skills to understand biological problems in connection with the Molecular and Cellular Biology and Genetics.
B2	Skills of decision making for the problem solving: that are able to apply theoretical knowledges and practical acquired in the formulation of biological problems and the looking for solutions.
B3	Skills of management of the information: that are able to gather and to understand relevant information and results, obtaining conclusions and to prepare reasoned reports on scientific and biotechnological questions
B4	Organization and work planning skills: that are able to manage the use of the time as well as available resources and to organize the work in the laboratory.
B5	Ability to draft, represent, analyze, interpret and present technical documentation and relevant data in the field of the branch of knowledge of the master's degree in the native language and at least in another International diffusion language.
B6	Skills of team work: that are able to keep efficient interpersonal relationships in an interdisciplinary and international work context, with respect for the cultural diversity.
B7	Personal progress skills : that are able to learn from freelance way, adapting to new situations, developing necessary qualities as the creativity, skills of leadership, motivation for the excellence and the quality.
B8	Critical reasoning skills and ethical commitment with the society: sensitivity in front of bioethical problems and to the ones related to the natural resource conservation
B9	Skills of preparation, show and defense of a work.
B11	Possess and understand knowledge that provides a basis or opportunity to be original in the development and / or application of ideas, often in a research context
B12	That students know how to apply the knowledge acquired and their ability to solve problems in new or little-known environments within broader (or multidisciplinary) contexts related to their area of ??study

B13	That students are able to integrate knowledge and face the complexity of formulating judgments based on information, which, being incomplete or limited, includes reflections on the social and ethical responsibilities linked to the application of their knowledge and judgments
B14	That students know how to communicate their conclusions and the knowledge and ultimate reasons that support them to specialized and non-specialized audiences in a clear and unambiguous way
B15	That students possess the learning skills that allow them to continue studying in a way that will be largely self-directed or autonomous
C1	Ability to express oneself correctly, both orally and in writing, in the official languages of the autonomous community
C2	Ability to know and use appropriately the technical terminology of the field of knowledge of the master, in the native language and in English, as a language of international diffusion in this field
C3	Using ICT in working contexts and lifelong learning.
C4	Acting as a respectful citizen according to democratic cultures and human rights and with a gender perspective.
C5	Understanding the importanceof entrepreneurial culture and the useful means for enterprising people.
C6	Acquiring skills for healthy lifestyles, and healthy habits and routines.
C7	Developing the ability to work in interdisciplinary or transdisciplinary teams in order to offer proposals that can contribute to a sustainable environmental, economic, political and social development.
C8	Valuing the importance of research, innovation and technological development for the socioeconomic and cultural progress of society.
C9	Ability to manage times and resources: developing plans, prioritizing activities, identifying critical points, establishing goals and accomplishing them.

Learning outcomes			
Learning outcomes	Study programme competences / results		
The student will do an experimental work integrated into a research group or, alternatively, will undertake a personal research project; in both cases under the direction of a doctor. The personal research work is not just a literature review, but implies the development of a project. The work will be written and then exposed and defended in public session. The rules of TFM are in the WEB of the Master	AR1 AR2 AR3 AR8 AR13	BR1 BR2 BR3 BR4 BR5 BR6 BR7 BR8 BR9 BC1 BC2 BC3 BC4 BC5	CC1 CC2 CC3 CC4 CC5 CC6 CC7 CC8 CC9

Contents	
Topic	Sub-topic
The specific topics of the TFM work of each academic year will be announced at the beginning of the first semester, based on enrollment and availability of teachers to guide them. Generic topics and contact details of teachers are released before the pre -registration period.	Os temas concretos dos traballos do Mestrado de cada curso académico daránse a conocer ao principio do primer cuatrimestre en función dos alumnos matriculados e da disponibilidade de profesores para dirixirlos. Os temas xenéricos e profesores de contacto se dan a coñecer antes do periodo de pre-inscripción.

Planning				
Methodologies / tests	Competencies / Results	Teaching hours (in-person & virtual)	Student?s personal work hours	Total hours

Introductory activities	C7	2	0	2
Research (Research project)	A2 A1 A3 A8 A13 B1 B3 B2 B4 B6 B7 B8 C2 C3 C4 C5 C6 C7 C8 C9	112	20	132
Directed discussion	A8 B1 B7 B8 B11 B12 B13 B15 C6 C8	6	12	18
Oral presentation	B5 B9 B14 C1 C3	0	20	20
Summary	A3 A8 B3 B9 C1 C2	0	70	70
Document analysis	A3 B3 C2	0	50	50
Personalized attention		8	0	8
(*)The information in the planning table is for guidance only and does not take into account the heterogeneity of the students.				

Methodologies	
Methodologies	**Description**
Introductory activities	Aimed at selecting the theme / Director
Research (Research project)	Laboratory work or project
Directed discussion	Data analysis and discussion with director / tutor ahead of the drafting of conclusions
Oral presentation	Public exhibition and defence
Summary	Preparation of the writing summary of the work (Memoria TFM)
Document analysis	Bibliographic search to define "state of the art" in the written memory

Personalized attention	
Methodologies	**Description**
Oral presentation Introductory activities Research (Research project) Directed discussion Document analysis Summary	The Personalized attention hours will be distributed by the director / tutor

Assessment			
Methodologies	**Competencies / Results**	**Description**	**Qualification**
Oral presentation	B5 B9 B14 C1 C3	The competences achieved in the analysis of the documentary sources, the written report, presentation and public defense of the work are evaluated using a rubric used by members of the evaluating committee and published in the web of the master.	30
Research (Research project)	A2 A1 A3 A8 A13 B1 B3 B2 B4 B6 B7 B8 C2 C3 C4 C5 C6 C7 C8 C9	The director of the TFM evaluates these competencies through the rubric published on the website of the master. The % of the final score may represent 30% or less at the discretion of the evaluating committee.	30

Summary	A3 A8 B3 B9 C1 C2	The competences achieved in the analysis of the documentary sources, the written report, presentation and public defense of the work are evaluated using a rubric used by members of the evaluating committee and published in the web of the master.	40

Assessment comments

Sources of information	
Basic	They will be specific to each job and for the most part they should be found by the students.They will be specific to each job and for the most part they should be found by the students.
Complementary	

Recommendations
Subjects that it is recommended to have taken before
Subjects that are recommended to be taken simultaneously
Subjects that continue the syllabus
Other comments
Green Campus Science Faculty Program To contribute to achieving an immediate sustainable environment and comply with point 6 of the "Environmental Declaration of the Faculty of Sciences (2020)", the documentary work carried out in this area: They will be requested mostly in virtual format and computer support.

(*)The teaching guide is the document in which the URV publishes the information about all its courses. It is a public document and cannot be modified. Only in exceptional cases can it be revised by the competent agent or duly revised so that it is in line with current legislation.