



Teaching Guide

Identifying Data					2015/16
Subject (*)	Traballo de Máster		Code	610441022	
Study programme	Mestrado Universitario en Bioloxía Molecular , Celular e Xenética				
Descriptors					
Cycle	Period	Year	Type	Credits	
Official Master's Degree	Yearly	First	Obligatoria	12	
Language	SpanishFrenchGalicianEnglish				
Teaching method	Face-to-face				
Prerequisites					
Department	Bioloxía Animal, Bioloxía Vexetal e EcoloxíaBioloxía Celular e MolecularMedicinaPsicología				
Coordinador	Cerdan Villanueva, Maria Esperanza		E-mail	esper.cerdan@udc.es	
Lecturers	, Arufe Gonda, María del Carmen Becerra Fernandez, Manuel Cerdan Villanueva, Maria Esperanza Diaz Varela, Jose Freire Picos, María Ángeles Gonzalez Siso, Maria Isabel Gonzalez Tizon, Ana Maria Herrero Lopez, Maria Concepcion Laffon Lage, Blanca Lamas Maceiras, Mónica Mendez Felpeto, Josefina Nantón Varela, Ana Pomar Barbeito, Federico Rioboo Blanco, Carmen Rodriguez Torres, Ana Maria Silvar Pereiro, Cristina Veloso Freire, Javier		E-mail	esther.novo@udc.es maria.arufe@udc.es manuel.becerra@udc.es esper.cerdan@udc.es jose.diaz.varela@udc.es maria.freirep@udc.es isabel.gsiso@udc.es ana.gonzalez.tizon@udc.es concepcion.herrero@udc.es blanca.laffon@udc.es monica.lamas@udc.es josefina.mendez@udc.es ana.nanton@udc.es federico.pomar@udc.es carmen.rioboo@udc.es ana.rodriguez.torres@udc.es c.silvar@udc.es javier.veloso@udc.es	
Web	<a href="http://ciencias.udc.es/MBMCG/">http://ciencias.udc.es/MBMCG/</a>				
General description	All the Master professors may direct the TFM (trabajos Fin de Master , the end of Master Work). Respect to those researchers and doctors not belonging to the Master, they may direct TFMs when they have an assigned Tutor/advisor that has to be from the Master.				

Study programme competences

Code	Study programme competences
A1	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.
A2	Skills of working in a sure way in the laboratories knowing operation handbooks and actions to avoid incidents of risk.
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	Correct oral and written communication on scientific topics 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.
C1	Skills of expressing correctly, so much of oral form as written, in the official languages of the autonomous region.
C2	Skills of dominating the oral form expression and compression and written of a foreign language.
C3	Skills of Using basic tools of the information technologies and communications (ICT) necessary to the exercise of his profession and for the apprenticeship over his life.
C4	Skills of take place for the exercise of an open citizenship, highbrow, critic, committed, democratic and solidary, able to analyze the reality, diagnosing problems, formulating and to implement solutions based on the knowledge and oriented to common good.
C5	Understanding the importance of the enterprising culture and to know means within reach of enterprising people.
C6	Considering critically the knowledge, technologies and the available information to solve problems with which should face.
C7	Assuming as a professional and citizen the importance of the apprenticeship over the life.
C8	Considering the importance that the investigation has, the innovation and the technological development in the socioeconomic advance and cultural of the society.

Learning outcomes			
Learning outcomes	Study programme competences		
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	BR1	CC1
	AR2	BR2	CC2
	AR3	BR3	CC3
	AR8	BR4	CC4
	AR13	BR5	CC5
		BR6	CC6
		BR7	CC7
		BR8	CC8
		BR9	

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.	

Planning				
Methodologies / tests	Competencies	Ordinary class hours	Student?s personal work hours	Total hours
Introductory activities	C7	2	0	2



Research (Research project)	A1 A2 A3 A8 A13 B1 B3 B2 B4 B6 B7 B8 C2 C3 C4 C5 C6 C7 C8	120	20	140
Directed discussion	A8 B1 B7 B8 C6 C8	6	12	18
Oral presentation	B5 B9 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		0	0	0

(\*)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 &quot;state of the art&quot; in the written memory

Personalized attention	
Methodologies	Description
Oral presentation Introductory activities Research (Research project) Directed discussion	It will be carried out by the director / tutor

Assessment			
Methodologies	Competencies	Description	Qualification
Oral presentation	B5 B9 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)	A1 A2 A3 A8 A13 B1 B3 B2 B4 B6 B7 B8 C2 C3 C4 C5 C6 C7 C8	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

<b>Basic</b>	Serán específicas para cada traballo e na maior parte buscadas polo propio alumno
<b>Complementary</b>	Serán específicas para cada traballo

## 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

(\*)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.