



Teaching Guide				
Identifying Data				2014/15
Subject (*)	Biotecnoloxía en plantas		Code	610441019
Study programme	Mestrado Universitario en Bioloxía Molecular , Celular e Xenética			
Descriptors				
Cycle	Period	Year	Type	Credits
Official Master's Degree	2nd four-month period	First	Optativa	3
Language	SpanishEnglish			
Prerequisites				
Department	Bioloxía Animal, Bioloxía Vexetal e Ecoloxía			
Coordinador	Pomar Barbeito, Federico	E-mail	federico.pomar@udc.es	
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Web				
General description				

Study programme competences	
Code	Study programme competences
A11	Skills of understanding the structure, dynamics and evolution of genomes and to apply tools necessary to his study.
A18	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.
B3	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.
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.
C6	Considering critically the knowledge, technologies and the available information to solve problems with which should face.
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			
Subject competencies (Learning outcomes)			Study programme competences
Knowing the importance of research, innovation and technological development in the economic and cultural advancement of society.		BR8	CC6 CC8
Ability to manage information: gather and interpret data, information and relevant results, draw conclusions and issue reasoned reports on scientific and biotechnological issues		BR1 BR3 BR8 BR9	
Ability to understand the current state of the Plant Biotechnology and use Basic terminology used in the field	AR8 AR13	BR1	CC8

Contents	
Topic	Sub-topic
Tema 1.- Introduction	-
Tema 2.- In vitro culture	-
Tema 3.- Genetic transformation	-
Tema 4.- Biolistic	-
Tema 5.- GM applications	-
Tema 6.- Phytoremediation	-



Planning

Methodologies / tests	Ordinary class hours	Student?s personal work hours	Total hours
Workbook	0	25	25
Field trip	4	4	8
Introductory activities	1	0	1
Case study	4	35	39
Personalized attention	2	0	2

(*)The information in the planning table is for guidance only and does not take into account the heterogeneity of the students.

Methodologies

Methodologies	Description
Workbook	The nature of this course is blended. Following a presentation of the contents thereof, different ppt files and text for self-study student will be added to the distance learning moodle platform. These files are self-explanatory, but if necessary it may consult with teachers via email or in person
Field trip	It raises at least one outlet to an industry / science center where views methodologies applied in the subject
Introductory activities	In a single initial session the subject will be presented explaining its methodology and the evaluation method
Case study	the student is faced with a hypothetical case to be resolved by applying the knowledge you gain from working the readings. In a first phase, the work will be done in groups, in a second phase to work individually.

Personalized attention

Methodologies	Description
Workbook Case study	In tutorial sessions, each student will discuss with the teacher the progress of the course, and all questions that are submitted to the content thereof. Four specific tutorial sessions to develop the case also be scheduled.

Assessment

Methodologies	Description	Qualification
Case study	Following the work of "case study" the student has to submit its findings to the teaching staff who will assess the use of the information provided to the student, and the degree of understanding of it. Will also take into account the management of existing sources of information. This wok evaluates following competencies: A8,A9,B1,B3,B8,B9	100

Assessment comments

The score needed to pass the course will be 5 points. Students who do not meet this note must repeat the assignment.
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Sources of information

Basic	
Complementary	

Recommendations

Subjects that it is recommended to have taken before

Técnicas Celulares/610441001
Técnicas Moleculares/610441002

Subjects that are recommended to be taken simultaneously

Mecanismos Moleculares da Interacción Planta-patóxeno/610441018

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.