UNIVERSIDADE DA CORUÑA

Teaching Guide				
Identifying Data				2015/16
Subject (*)	Células Nai e Terapia Celular		Code	610441009
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	SpanishGalicianEnglish			
Teaching method	Face-to-face			
Prerequisites				
Department	Medicina			
Coordinador	Arufe Gonda, María del Carmen	E-mail	maria.arufe@udc.es	
Lecturers	Arufe Gonda, María del Carmen Blanco García, Francisco Javier Domenech García, Nieves Rendal Vázquez, María Esther	E-mail	maria.arufe@udc.es fblagar@sergas.es nieves.domenech.garcia@sergas.es esther_rendal@canalejo.org	
Web				
General description	Subject´s coordinador :María del Carmen Arufe Gonda maria.arufe@udc.es Teachers from INIBIC: Dr. Fco. Javier Blanco García (fblagar@sergas.es) Dra. Nieves Domenech García (nieves.domenech.garcia@sergas.es) Dra. Mª Esther Rendal Vázquez			

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.
A6	Skills of understanding the functioning of cells through the structural organization, biochemistry, gene expression and genetic variability.
A7	Skills of knowing and analyzing specific cellular systems as stem cells, nerve cells, cells of the immune system, or other cells related to several pathologies.
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.
B1	Analysis skills to understand biological problems in connection with the Molecular and Cellular Biology and Genetics.
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.
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
C1	Skills of expressing correctly, so much of oral form as written, in the official languages of the autonomous region.
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	
Learning outcomes	Study programme competences

The study of cellular techniques	AR1 AR2 AR6 AR7 AR8	BR1 BR3 BR4 BR8	CC1 CC6 CC8

Contents	
Topic	**Sub-topic**
Introduction	Culture area for cell therapy. Stem cells and therapy basic cell. Embryonic stem cells and therapeutic cloning.
Search cell sources for cell therapy	Obtaining mesenchymal stem cells from umbilical strome. Cell therapy in cartilage recovery. Cell therapy in myocardial recovery. Culture of ocular limbal cells to repair
Tissue Engineering	Transplantation of tissue-engineered skin produced. Scaffolds and Biopolymers in tissue engineering.

Planning				
Methodologies / tests	**Competencies**	**Ordinary class hours**	**Student?s personal work hours**	**Total hours**
Guest lecture / keynote speech	A1 A2 B1 B3 B4 C6 C8	14	35	49
Laboratory practice	B4 B8 C1 C6 C8	9	0	9
Seminar	C6 C8	2	14	16
Objective test	A6 A7 A8 C1 C6	1	0	1
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**
Guest lecture / keynote speech	Lecture participatory, encouraging the exchange of views, debate and answer questions from students.
Laboratory practice	They unfold techniques currently used in biomedical research, complementing the knowledge imparted in the keynote session.
Seminar	Invitation some scientist to show us her most recent research.
Objective test	Multiple choice exam in which each question consists of 4 claims of which only one is correct.

Personalized attention	
Methodologies	**Description**
Guest lecture / keynote speech Laboratory practice	Being a small group of students, it is possible to resolve doubts and individualized monitoring during the learning process itself. In particular, the master class is participatory, encouraging the exchange of opinions, debate and answer questions. The students in labs are supervised at all times by teachers and, if necessary, by the research group in which the student integrates (since starting the course, each student joins a research group which will develop their Master's Thesis).

Assessment			
Methodologies	**Competencies**	**Description**	**Qualification**

Guest lecture / keynote speech	A1 A2 B1 B3 B4 C6 C8	Attendance and participation	15
Objective test	A6 A7 A8 C1 C6	Questions about the theory and methodology used in the class.	40
Seminar	C6 C8	Reading and discussion commented.This activity will be assessed the acquisition of skills A18, B1, B3, B4, B8.	15
Laboratory practice	B4 B8 C1 C6 C8	Attendance and participation. This activity will be assessed the acquisition of skills A3, A4, A6, A9, A10	30

Assessment comments

Sources of information	
Basic	Especificaránse na aplicación da materia
Complementary	

Recommendations
Subjects that it is recommended to have taken before
Técnicas Celulares/610441001
Subjects that are recommended to be taken simultaneously
Técnicas Moleculares/610441002
Subjects that continue the syllabus
Bioloxía Celular Avanzada/610441003
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.