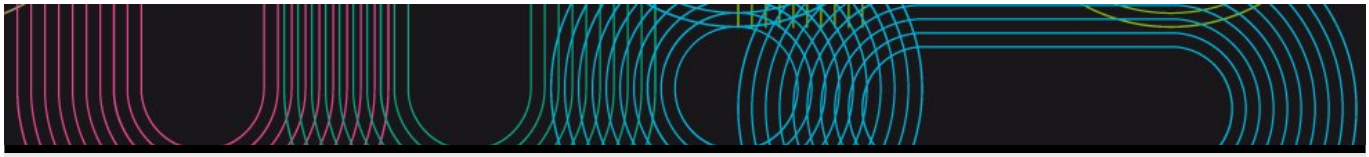
Universidade Vigo

Subject Guide 2018 / 2019



IDENTIFYING DATA				
Assisted Reproduction				
Subject	Assisted Reproduction			
Code	V02M074V01213			
Study programme	(*)Máster Universitario en Biotecnoloxía Avanzada			
Descriptors	ECTS Credits	Choose	Year	Quadmester
	3	Optional	1st	2nd
Teaching language	Spanish			
Department	Biochemistry, Genetics and Immunology External			
Coordinator	Valverde Pérez, Diana Becerra Fernández, Manuel			
Lecturers	Aguilar Prieto, Jesús Becerra Fernández, Manuel Fernández , Iria Muñoz Muñoz, Elkin Ojeda Varela, María Pérez Fernández, María Portela Pérez, Susana Prado López, Sonia Táboas Lima, Esther Valverde Pérez, Diana			
E-mail	manu@udc.es dianaval@uvigo.es			
Web	http://http://masterbiotecnologiaavanzada.com/index.php/plan-docente/materias			
General description	Matter focused to the development of capacities and competitions in the field of the *fecundación *in *vitro. Knowledge of the technicians that use , *análisi of the ethical and legal questions that accompany to this type and analysis			

Competencies	
Code	
A2	(*)Que os estudantes saiban aplicar os coñecementos adquiridos e a súa capacidade de resolución de problemas en contornos novos ou pouco coñecidos dentro de contextos máis amplos (ou multidisciplinares) relacionados coa súa área de estudo.
A3	(*)Que os estudantes sexan capaces de integrar coñecementos e se enfrontar á complexidade de formular xuízos a partir dunha información que, sendo incompleta ou limitada, inclúa reflexións sobre as responsabilidades sociais e éticas vinculadas á aplicación dos seus coñecementos e xuízos.
A4	(*)Que os estudantes saiban comunicar as súas conclusións, e os coñecementos e razóns últimas que as sustentan, a públicos especializados e non especializados dun xeito claro e sen ambigüidades.
A5	(*)Que os estudantes posúan as habilidades de aprendizaxe que lles permitan continuar estudando dun xeito que terá que ser, en grande medida, autodirixido e autónomo.
C18	(*)CEC18.- Posuír un amplo coñecemento dos aspectos éticos e legais que afectan ás diferentes disciplinas relacionadas coa biotecnoloxía.
C34	(*)CEO14.- Coñecer e saber aplicar as técnicas de reprodución asistida en humanos e animais.
D1	
D2	
D3	
D4	
D5	
D6	
D7	

D8
D9
D10
D11
D12
D13
D14
D15

Learning outcomes	
Expected results from this subject	Training and Learning Results
Possess a wide knowledge of the ethical and legal appearances that affect to the technical employees in Reproduction Assisted.	A2 C18 C34
Utilisation of scientific and independent criteria for *sustentar the taking of decisions, adapting to the new situations. Autonomous learning, developing leadership and capacity of coordination. Sensitisation to the quality, the environmental respect, the responsible consumption of resources and the recovery of waste.	A3 C34 D12 D13 D14 D15
Assessment of the literature specialised the resolution of the problems Capacity of analysis and synthesis in the resolution of problems, capacity of organisation and planning of the necessary resources and capacity of management of the information. Capacity of planning and preparation of technical studies in microbial biotechnology, vegetal and animal. Capacity of oral communication and writing of the plans and decisions taken, development of an effective communication.	A4 C34 D1 D2 D3 D4 D5 D6 D7 D8
Use a suitable logical structure and an appropriate language for him public in the specialist and defend them in front of experts of the thematic. Capacity of work in team *multidepartamental inside the company. Capacity of work in a context of sustainability, characterised by: sensitivity of by half and by the different organisms that integrate it, as well as awareness by the sustainable development. Critical reasoning and deep respect by the ethical and the intellectual integrity.	A5 C18 C34 D9 D10 D11
Know and know apply the technicians of reproduction assisted in humans and animal.	C18 C34
Know and know apply the technicians of molecular diagnostic *preimplantacional of embryos.	C18 C34

Contents	
Topic	
Introduction	Presentation and structuring of the matter. Preparation of the works.
1.Assisted Reproduction Physiology	General Aspects of endocrine control, ovaric, endometrial and tubaric physiology. Fecundation, embrionic development and implantation.
2. Clinical evaluation	Definition and epidemiology of esterility. Evaluation of the couple: feminine genital Anatomy, ovarian Factor, masculine Factor.
3. Andrology	Seminogram Espermatic Qualification and preparation of the samples for the distinct techniques of assisted reproduction (insemination, in vitro fecundation, ICSI, testicle biopsy, seminal washes, ovocyte activation with Ica2) Techniques of spermatic selection: IMSI, espermatic fragmentation, MACS Semen bank (bank organisation, spermatic criopreservation and screening)

4. Techniques in assisted reproduction	Clinical aspects: LOW COMPLEXITY TECHNIQUES: artificial intrauterine insemination . HIGH COMPLEXITY TECHNICIANS: FIV, ovocytes donation, PGT-A, PGT-M, PGT-SR. Laboratory: Ovocitary recovery Techniques of fecundación: FIV /ICSI Development and embryonic quality: Time-lapse Embryonic Transfer Ovocitary and embryonic vitrification Embryonic Biopsy: blastómeras and trofoectodermo. Analysis of the embryonic material: FISH, NGS, PCR Analysis of the endometrial material: ERA.
5. Legal Aspects	Legislation in reproduction assisted in Spain Ethical European Situation in reproduction assisted special Situations.
6. Applications	Contributions and therapeutic probabilities of the cells embryonic mothers. Problems of him use of cells mother like therapeutic alternative therapeutic and reproductive Cloning. Nuclear transfer Research of other alternative sources: IPs

Planning

	Class hours	Hours outside the classroom	Total hours
Introductory activities	0.5	0	0.5
Lecturing	15	22.5	37.5
Presentation	1	2	3
Case studies	1	1	2
Clinical practice	5	5	10
Objective questions exam	2	0	2
Case studies	0	12	12
Practices report	0	8	8

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

Methodologies

	Description
Introductory activities	Activities directed to take contact and gather information on the students, as well as to present the matter.
Lecturing	Exhibition by part of the professor of the contents on the matter object of study, theoretical bases and/or guidelines of a work, exercise or project to develop by the student.
Presentation	Exhibition by part of the students in front of the educational and/or a group of students of a subject on contents of the matter or of the results of a work, exercise, project... Can carry out of individual way or in group.
Case studies	Analysis of a fact, problem or real event with the purpose to know it, interpret it, resolve it, generate hypothesis, contrast data, discuss, complete knowledges, diagnose it and propose alternative solution
Clinical practice	The student develop the activities in a context related with the exercise of a profession in the area of Sciences of the Health. Practical work will be organized in collaboration with IVI centre of assisted reproduction in Vigo and Quirón Clinic in La Coruña.

Personalized attention

Methodologies	Description
Introductory activities	Academic activity developed by the teacher, individual or in small group, with the purpose to attend the needs and queries of the students related with him study and/or subjects linked with the matter, providing him orientation, support and motivation in him process of learning. This activity can develop of face-to-face form (directly in classroom or at the academic despath) or no face-to-face (through email at virtual campus).
Lecturing	Academic activity developed by the teacher, individual or in small group, that has the purpose to attend the needs and queries of the students related with the study and/or subjects linked with the matter, providing him orientation, support and motivation in the process of learning. This activity can develop of face-to-face form (directly in classroom or at academic despath) or no face-to-face (through email at virtual campus).

Assessment

	Description	Qualification	Training and Learning Results		
Objective questions exam	They evaluated the knowledges purchased in class to *traves of proofs of type test	50	A2 A3	C18 C34	D1 D11 D13
Case studies	*Exposicion Of a case proposed for the contribution of ideas for his solution	30	A4 A5	C18 C34	D1 D2 D3 D4 D5 D6 D7 D8 D9 D10 D11 D12 D13 D14 D15
Practices report	It will realise a visit to a laboratory of *RA, evaluated the assistance, the *presentacion of a memory of the visit and he interest in the same	20	A3	C18 C34	D13 D15

Other comments on the Evaluation

To the equal that the rest of the matters of the *Máster, the evaluation will realise of continuous way during the weeks assigned to the face-to-face teaching. It tests it type test will realise on 21 March 2018 (15:00 *h), in first opportunity, and on 3 July 2018 (16:00 *h).

Sources of information

Basic Bibliography

Complementary Bibliography

Santaeulària I Pérez, Ariadna, **Manual Práctico de Esterilidad y Reproducción Humana**, 4 edicion, McGraw Hill, 2012

Ley 14/2007, 3 de julio de Investigacion Biomedicina, OE 159, 4 de Julio 2007, 2007

Fernando; Sánchez Caro, **Reproducción humana asistida y responsabilidad médica : protócolos de consentimiento informado de la sociedad española de fertilidad**, Editorial Comares, 2003

Sociedad española de fertilidad, **http://nuevo.sefertilidad.com/**,

European Society of Human Reproduction and embriology, **https://www.eshre.eu/Guidelines-and-Legal.aspx**,

American Association of Reproductive Medicine, **https://connect.asrm.org/home?ssopc=1**,

Recommendations

Other comments

It is advisable that the students have knowledge of English to level of compression of texts, since it splits of the sources of information that will consult are published in this tongue.