

COURSE DESCRIPTION

COURSE DETAILS

Title (of the course): **EQUINE REPRODUCTIVE TECHNOLOGIES**

Code: 101515

Degree/Master: **GRADO DE VETERINARIA**

Year: 5

Field:

Character: OPTATIVA

Duration: FIRST TERM

ECTS Credits: 3.0

Classroom hours: 30

Face-to-face classroom percentage: 40.0%

Study hours: 45

Online platform: www.uco.es/moodle

LECTURER INFORMATION

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Area: MEDICINA Y CIRUGÍA ANIMAL

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PREREQUISITES AND RECOMMENDATIONS

Prerequisites established in the study plan

Students must hold at least B1 English level.

Recommendations

This subject is fully given in English language according to the guidelines of the Plan to Promote Plurilingualism of the University of Cordoba (<https://sede.uco.es/bouco/bandejaAnuncios/BOUCO/2017/00071>).

It is advisable that students should have at least a B-1 level in English language to participate in the course of Reproductive technologies.

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INTENDED LEARNING OUTCOMES

CU1	To prove mastery in the use of a foreign language.
CU2	To know and improve the user's level in the field of ICT.
CU3	To promote the attitude of active search of employment and the capability of entrepreneurship.
CT1	Ability to resolve problems.
CT2	Ability to work in a team.
CT3	Ability to apply practical knowledge.
CT4	Ability to make decisions.
CT5	To acquire a moral commitment.
CT6	Ability to analyse and summarise.
CT7	Research abilities
CT8	To have developed the motivation for quality.
CE38	Knowledge of assisted reproduction and application of that knowledge.

OBJECTIVES

This course is oriented to provide an advanced Knowledge of the development and application of the modern reproductive technologies to horse breeding programs. Students will acquire experience in different technologies utilised in equine reproduction, such as semen collection and evaluation, artificial insemination, oocyte recovery, gamete and embryo preservation, embryo transfer, in vitro fertilization, ICSI and cloning.

CONTENT

1. Theory contents

- Novel techniques for sperm processing and analysis: management of fertile and subfertile stallions.
- Artificial insemination with cryopreserved and sexed semen: application to equine industry.
- New methods for conservation of equine sperm: vitrification.
- Advances in oocyte collection and evaluation: post-mortem and transvaginal aspiration.
- Vitrification of equine oocytes, in vivo and in vitro-produced embryos.
- In vitro fertilization: conventional IVF and intracytoplasmic sperm injection (ICSI)
- Somatic cell nuclear transfer (SCNT): cloning

2. Practical contents

- Semen collection and evaluation: function testing and sperm selection techniques to improve equine sperm quality.
- Cryopreservation of sperm: update on techniques
- Artificial insemination: semen doses, monitoring of mare estrus cycle, and deep-horn and endoscopic techniques.
- Oocyte recovery, evaluation, maturation, shipping and vitrification techniques.
- Research papers and interactive clinical cases.



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SUSTAINABLE DEVELOPMENT GOALS RELATED TO THE CONTENT

Good health and well-being
Quality education
Gender equality
Partnerships for the goals

METHODOLOGY

Methodological adaptations for part-time students and students with disabilities and special educational needs

Specific learning conditions will be provided for part-time and disabled students

Face-to-face activities

Activity	Large group	Small group	Total
<i>Assessment activities</i>	1	-	1
<i>Listening Activities</i>	14	3	17
<i>Reading Activities</i>	-	3	3
<i>Speaking Activities</i>	-	5	5
<i>Text analysis</i>	-	1	1
<i>Writing Activities</i>	-	3	3
Total hours:	15	15	30

Off-site activities

Activity	Total
<i>Analysis</i>	5
<i>Group work</i>	5
<i>Information search</i>	5
<i>Reference search</i>	5
<i>Self-study</i>	25
Total hours	45

WORK MATERIALS FOR STUDENTS

Case studies
Oral presentations

COURSE DESCRIPTION

EVALUATION

Intended learning	Document Analysis	Exams	Laboratory Practice
CE38	X	X	X
CT1			X
CT2	X		
CT3			X
CT4			X
CT5			X
CT6	X		
CT7	X		X
CT8	X		
CU1	X	X	X
CU2	X		
CU3	X		
Total (100%)	20%	40%	40%
Minimum grade	5	5	5

(*)Minimum mark (out of 10) needed for the assessment tool to be weighted in the course final mark. In any case, final mark must be 5,0 or higher to pass the course.

COURSE DESCRIPTION

Method of assessment of attendance:

All students should have a minimum attendance of 70% of all practices to be evaluated in this part of the subject.

General clarifications on instruments for evaluation:

The exam consists of multiple choice questions

Minimum score to eliminate content: 5 out of 10.

Clarifications on the methodology for part-time students and students with disabilities and special educational needs:

Specific learning conditions will be provided for part-time and disabled students

The scores obtained in document analysis and laboratory practice will be maintained (if these evaluation instruments have been passed) for the non-ordinary evaluation calls of the next academic course (October and April)

Clarifications on the evaluation of the first extraordinary call and extra-ordinary call for completion studies:

The methodology for evaluation included this syllabus as well as the teaching material provided to the students will be maintained for the non-ordinary evaluation calls of the next academic course (October and April).

Qualifying criteria for obtaining honors:

10

BIBLIOGRAPHY

1. Basic Bibliography

- Blanchard et al., (2011). Manual of Equine Reproduction. 3ª edición. Editorial Mosby.
- Feldman and Nelson, (2004). Endocrinology and Reproduction. 3ª edición. Editorial Saunders.
- Jackson, (2004). Handbook of Veterinary Obstetrics. 2ª edición. Editorial Saunders.
- McKinnon and Voss, (2011). Equine Reproduction. 2ª edición. Editorial Lea and Febiger.
- Noakes et al., (2018). Veterinary Reproduction and Obstetrics. 10ª edición. Editorial Saunders.

2. Further reading

None

COORDINATION CRITERIA

Joint activities: lectures, seminars, visits ...

COURSE DESCRIPTION

SCHEDULE

Period	Assessment activities	Listening Activities	Reading Activities	Speaking Activities	Text analysis	Writing Activities
1# Fortnight	0,0	4,0	0,0	0,0	0,0	0,0
2# Fortnight	0,0	4,0	0,0	0,0	0,0	0,0
3# Fortnight	0,0	4,0	0,0	0,0	0,0	0,0
4# Fortnight	0,0	4,0	0,0	0,0	0,0	0,0
5# Fortnight	0,0	1,0	0,0	3,0	0,0	0,0
6# Fortnight	0,0	0,0	0,0	2,0	1,0	0,0
7# Fortnight	0,0	0,0	3,0	0,0	0,0	3,0
8# Fortnight	1,0	0,0	0,0	0,0	0,0	0,0
Total hours:	1,0	17,0	3,0	5,0	1,0	3,0

The methodological strategies and the evaluation system contemplated in this Course Description will be adapted according to the needs presented by students with disabilities and special educational needs in the cases that are required.

CONTINGENCY PLAN: CASE SCENARIO A

Case scenario A will correspond to a diminished on-site academic activity due to social distancing measures affecting the permitted capacity of classrooms.

METHODOLOGY

General clarifications on the methodology on case scenario A

A multimodal (hybrid) teaching system will be adopted, combining both on-site and remote classes via videoconference (synchronous) that will be held in the timetable approved by the corresponding Faculty or School. The time distribution of teaching activities (both on-site and remote) will be decided by the aforementioned Faculties and Schools bearing in mind the permitted capacity of classrooms and social distancing measures as established at that time.

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EVALUATION

Intended learnig	Document Analysis	Exams	Laboratory Practice
CE38	X	X	X
CT1			X
CT2	X		
CT3			X
CT4			X
CT5			X
CT6	X		
CT7	X		X
CT8	X		
CU1	X	X	
CU2	X		
CU3	X		
Total (100%)	20%	40%	40%
Minimum grade	4	4	4

(*)Minimum mark (out of 10) needed for the assessment tool to be weighted in the course final mark. In any case, final mark must be 5,0 or higher to pass the course.

Method of assessment of attendance (Scenario A):

All students should have a minimum attendance of 70% of all practices to be evaluated in this part of the subject.

General clarifications on instruments for evaluation (Scenario A):

The exam consists of multiple choice questions

Minimum score to eliminate content: 5 out of 10.

Clarifications on the methodology for part-time students and students with disabilities and special educational needs (Scenario A):

Specific learning conditions will be provided for part-time and disabled students

COURSE DESCRIPTION

CONTINGENCY PLAN: CASE SCENARIO B

Case scenario B will bring about a suspension of all on-site academic activities as a consequence of health measures.

METHODOLOGY

General clarifications on the methodology on case scenario B

On-site teaching activities will be held via videoconference (synchronous) in the timetable approved by the corresponding Faculty or School. Alternative activities will be proposed for reduced groups in order to guarantee the acquisition of course competences.

EVALUATION

Intended learnig	Document Analysis	Exams	Laboratory Practice
CE38	X	X	X
CT1			X
CT2	X		
CT3			X
CT4			X
CT5			X
CT6	X		
CT7	X		X
CT8	X		
CU1	X	X	X
CU2	X		
CU3	X		
Total (100%)	20%	40%	40%
Minimum grade	4	4	4

(*)Minimum mark (out of 10) needed for the assessment tool to be weighted in the course final mark. In any case, final mark must be 5,0 or higher to pass the course.

Moodle Tools	Document Analysis	Exams	Laboratory Practice
Questionnaire		X	

COURSE DESCRIPTION

Moodle Tools	Document Analysis	Exams	Laboratory Practice
<i>Synchronous tests via videoconference</i>		X	
<i>Task</i>			X
<i>Videoconference</i>			X
<i>Workshops</i>	X		

Method of assessment of attendance (Scenario B):

All students should have a minimum attendance of 70% of all practices to be evaluated in this part of the subject.

General clarifications on instruments for evaluation (Scenario B):

The exam consists of multiple choice questions

Minimum score to eliminate content: 5 out of 10.

Clarifications on the methodology for part-time students and students with disabilities and special educational needs (Scenario B):

Specific learning conditions will be provided for part-time and disabled students