

## COURSE DESCRIPTION

### COURSE DETAILS

Title (of the course): **EMBRIOLOGÍA**

Code: 101454

Degree/Master: **GRADO DE VETERINARIA**

Year: 1

Name of the module to which it belongs: FORMACIÓN BÁSICA COMÚN

Field: ANATOMÍA Y EMBRIOLOGÍA VETERINARIAS

Character: BASICA

Duration: FIRST TERM

ECTS Credits: 3.0

Classroom hours: 30

Face-to-face classroom percentage: 40.0%

Study hours: 45

Online platform: <http://www3.uco.es/moodlemap/>

### LECTURER INFORMATION

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### PREREQUISITES AND RECOMMENDATIONS

#### Prerequisites established in the study plan

Common requirements for Veterinary Degree

#### Recommendations

Common requirements for Veterinary Degree

This subject is delivered in two languages: English and Spanish. The Bilingual teaching will comply with the requirements of Bilingual Program of the University of Córdoba. For Students the required proficiency in English is equivalent to B2 level or above. It will be scheduled with the teaching groups arranged by the Veterinary School. One classroom group subdivided into three laboratory groups.

### INTENDED LEARNING OUTCOMES

CE6 Ontogenetic development, birth defects and applications of embryology.

## COURSE DESCRIPTION

### OBJECTIVES

This course is intended to provide Veterinary students with an overview of the basic facts and concepts of animal development.

By the completion of this course, students should be able to:

1. Describe the stages and processes of normal embryonic and fetal development in a variety of species-appropriate to Veterinary Medicine.
2. Describe the processes involved in the development of many common congenital malformations. Also, the students will demonstrate the ability to correlate between the embryological structures and their practical significance.

### CONTENT

#### 1. Theory contents

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The processes of **gametogenesis, fertilization, and cleavage**, leading to blastocyst formation.

**Gastrulation**, describing how the germ layers are formed and how they will eventually give rise to the embryo and fetal membranes.

The process of **implantation** and the formation of the **placenta and fetal membranes** as well as the purposes of these structures.

The **organogenesis**, describing the development of the organic systems regarding their congenital anomalies and the developmental concepts that are believed to be responsible for these anomalies.

#### 2. Practical contents

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Laboratory classes cover many of the concepts and techniques taught from the previous week of lectures.

### SUSTAINABLE DEVELOPMENT GOALS RELATED TO THE CONTENT

Good health and well-being

Quality education

Gender equality

Reduced inequalities

Climate action

### METHODOLOGY

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

It will be taken in account

#### Face-to-face activities

Activity	Large group	Small group	Total
Assessment activities	1	1	2

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Activity	Large group	Small group	Total
<i>Debates</i>	1	1	2
<i>Lab practice</i>	-	4	4
<i>Lectures</i>	14	4	18
<i>Speaking Activities</i>	1	1	2
<i>Tutorials</i>	1	1	2
<b>Total hours:</b>	<b>18</b>	<b>12</b>	<b>30</b>

### Off-site activities

Activity	Total
<i>Exercises</i>	5
<i>Information search</i>	5
<i>Reference search</i>	5
<i>Self-study</i>	30
<b>Total hours</b>	<b>45</b>

## WORK MATERIALS FOR STUDENTS

Coursebook  
Lessons summary  
Oral presentations

## EVALUATION

Intended learning	Exams	Laboratory Practice	Oral Presentation
<i>CE6</i>	X	X	X
<b>Total (100%)</b>	<b>50%</b>	<b>20%</b>	<b>30%</b>
<b>Minimum grade</b>	<b>5</b>	<b>5</b>	<b>5</b>

(\*)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:

Face-to-face comprehension quizzes will be carried out in the laboratory sessions.

### General clarifications on instruments for evaluation:

#### General clarification about the assessment procedure:

**Final exam.** The final exam is mandatory in order to pass this subject and without the continuous evaluation is 100% worth of the final grade.

**Continuous evaluation:** It is optative and it will be carried out throughout the course. It consists of weekly tests, quizzes, and assignments (up to worth 30% of the final grade) and oral presentations (up to 20% worth of the final grade). The global score achieved by continuous evaluation can be up to 50% worth of the final grade. Thereby, the final exam worth can be reduced from 100% to 50%, according to the score achieved in the continuous evaluation.

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

It will be taken into account.

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

**Final exam.** Multichoice test about the learning objectives of the course.

### Qualifying criteria for obtaining honors:

*calificación final mayor de 9 y prueba complementaria.*

## BIBLIOGRAPHY

### 1. Basic Bibliography

Gilbert, SF & Barresi MJF (2016). Developmental Biology. 11<sup>a</sup> ed. Sinauer Associates Inc.  
 Hyttel, P, Sinowatz F & Vejlsted M (2010): Essentials of Domestic Animal Embryology. Saunders, LTD.  
 McGeady TA, Quinn PJ, Fitzpatrick ES & Ryan MT (2017). Veterinary Embriology. Blackwell Publishing  
 Monterde, J.G. & Gil, F. (2012): Embriología para estudiantes de Veterinaria. Editorial Intermédica.  
 Morales, JL (2018). Fundamentos de embriología Vetrinaria. Ediciones DF.  
 Wolpert L, Tivkle C & Martinez Arias A (2015) Principles of development. 5<sup>o</sup> ed. OUP .

### 2. Further reading

None

## COORDINATION CRITERIA

Common learning outcomes

## COURSE DESCRIPTION

### SCHEDULE

Period	Assessment activities	Debates	Lab practice	Lectures	Speaking Activities	Tutorials
1# Fortnight	0,0	0,0	0,0	3,0	0,0	1,0
2# Fortnight	0,0	1,0	0,0	3,0	0,0	0,0
3# Fortnight	0,0	0,0	1,0	2,0	0,0	0,0
4# Fortnight	0,0	0,0	1,0	2,0	0,0	0,0
5# Fortnight	1,0	0,0	0,0	2,0	1,0	0,0
6# Fortnight	0,0	0,0	1,0	2,0	0,0	0,0
7# Fortnight	0,0	0,0	1,0	2,0	1,0	0,0
8# Fortnight	1,0	1,0	0,0	2,0	0,0	1,0
<b>Total hours:</b>	<b>2,0</b>	<b>2,0</b>	<b>4,0</b>	<b>18,0</b>	<b>2,0</b>	<b>2,0</b>

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.

A multimodal or hybrid teaching system will be adopted that combines, as far as possible, face-to-face classes in the classroom and face-to-face classes by videoconference (synchronous sessions) that will be taught at the time approved by the Center. The temporal distribution of the activities that will be carried out in person in the classroom and in-person by videoconference will be determined by the Center based on the capacity allowed in the teaching spaces and the sanitary measures of interpersonal distancing that are in force at all times.

## COURSE DESCRIPTION

### EVALUATION

Intended learnig	Exams	Laboratory Practice	Oral Presentation
CE6	X	X	X
<b>Total (100%)</b>	<b>50%</b>	<b>20%</b>	<b>30%</b>
<b>Minimum grade</b>	<b>4</b>	<b>4</b>	<b>4</b>

(\*)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):

Face-to-face comprehension quizzes will be carried out in the laboratory sessions.

#### General clarifications on instruments for evaluation (Scenario A):

##### General clarification about the assessment procedure:

**Final exam.** The final exam is mandatory in order to pass this subject and without the continuous evaluation is 100% worth of the final grade.

**Continuous evaluation:** It is optative and it will be carried out throughout the course. It consists of weekly tests, quizzes, and assignments (up to worth 30% of the final grade) and oral presentations (up to 20% worth of the final grade). The global score achieved by continuous evaluation can be up to 50% worth of the final grade. Thereby, the final exam worth can be reduced from 100% to 50%, according to the score achieved in the continuous evaluation.

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

It will be taken into account.

### 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.

The classroom teaching activity will be carried out by videoconference (synchronous sessions) at the time approved by the Center. Alternative activities will be proposed for the small groups that guarantee the acquisition of the competencies of this subject.

## COURSE DESCRIPTION

## EVALUATION

Intended learnig	Exams	Laboratory Practice	Oral Presentation
CE6	X	X	X
<b>Total (100%)</b>	<b>50%</b>	<b>20%</b>	<b>30%</b>
<b>Minimum grade</b>	<b>4</b>	<b>4</b>	<b>4</b>

(\*)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	Exposición oral	Exámenes	Prácticas de laboratorio
Asistencia	X	X	X
Cuestionario	X	X	X
Foro	X	X	X
Participación	X	X	X
Pruebas simultáneas por videoconferencia	X	X	X
Videoconferencia	X	X	X

**Method of assessment of attendance (Scenario B):**

Comprehension quizzes will be carried out in synchronous video teaching.

**General clarifications on instruments for evaluation (Scenario B):****General clarification about the assessment procedure:**

**Final exam.** The final exam is mandatory in order to pass this subject and without the continuous evaluation is 100% worth of the final grade.

**Continuous evaluation:** It is optative and it will be carried out throughout the course. It consists of weekly tests, quizzes, and assignments (up to worth 30% of the final grade) and oral presentations (up to 20% worth of the final grade). The global score achieved by continuous evaluation can be up to 50% worth of the final grade. Thereby, the final exam worth can be reduced from 100% to 50%, according to the score achieved in the continuous evaluation.

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

It will be taken into account.

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