

28412 - Animal Experiments I

Información del Plan Docente

Academic Year	2017/18
Faculty / School	105 - Facultad de Veterinaria
Degree	451 - Degree in Veterinary Science
ECTS	3.0
Year	
Semester	First semester
Subject Type	Optional
Module	---

1.General information

1.1.Introduction

1.2.Recommendations to take this course

1.3.Context and importance of this course in the degree

1.4.Activities and key dates

2.Learning goals

2.1.Learning goals

2.2.Importance of learning goals

3.Aims of the course and competences

3.1.Aims of the course

3.2.Competences

4.Assessment (1st and 2nd call)

4.1.Assessment tasks (description of tasks, marking system and assessment criteria)

5.Methodology, learning tasks, syllabus and resources

5.1.Methodological overview

The learning process designed for this subject is based on the following:

-**Theory sessions:** Participatory lectures will be taught in the classroom to a group of students.

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-Practical sessions: Initially, the teacher will make a short explanation of the session and after that, the students will perform the practice under the permanent supervision of the teachers.

5.2.Learning tasks

- **Theory sessions:** Theory sessions (24 hours) will be taught in the schedule established by the Faculty.

- **Practical sessions:** Practical sessions (6 hours) will be taught in the Laboratory of Physiology or in the Computer room, distributed in 3 sessions of 2 hours. The dates of the practicals will be announced in advance, so that the students choose for the date that best suits them.

5.3.Syllabus

The program offered to help the student achieve the expected results includes the following activities:

PROGRAM OF THEORY SESSIONS

Theory sessions are divided into 5 thematic blocks, with the timing and assignment of hours described below.

I. ETHICS AND LEGISLATION (2 h)

- **Theme 1.** Ethical principles of animal experimentation. The principle of the Three R's. Ethics committees of animal experimentation. Objective and functions.

- **Theme 2.** Legislation on animal experimentation. European, national and regional legislation.

II. ALTERNATIVES TO USE OF ANIMALS (2 h)

- **Theme 3.** Overview of alternative methods in animal studies. Experimentation "in vitro".

III. BIOLOGY, HUSBANDRY AND MAINTENANCE OF LABORATORY ANIMALS (15 h)

- **Theme 4.** Comparative anatomy and physiology of the laboratory animals.

- **Theme 5.** Breeding and reproduction of laboratory animals.

- **Theme 6.** Behaviour and welfare of laboratory animals. Stress and recognition of signs of stress and suffering. Environmental enrichment.

- **Theme 7.** Facilities and environment. Types of facilities for laboratory animals.

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- **Theme 8.** Factors affecting animal experiments: genetic standardization.
- **Theme 9.** Factors affecting animal experiments: microbiological standardization. Types of barrier and protected areas.
- **Theme 10.** Nutrition and feeding regimes. Types of diets.

IV. LABORATORY ANIMAL HEALTH (2 h)

- **Theme 11.** Health status and diseases prevention.
- **Theme 12.** Practical aspects of monitoring health and disease.

V. OCCUPATIONAL HEALTH AND BIOSAFETY AT WORK WITH EXPERIMENTAL ANIMALS (3 h)

- **Theme 13.** Health and safety of staff.
- **Theme 14.** Cleaning and disinfection of facilities.
- **Theme 15.** Proper waste and animal carcasses disposal procedures.

PROGRAM OF PRACTICAL SESSIONS

The program consists of 6 hours of practical activities, divided into 3 sessions of 2 hours. Practices involving the use of animals have been subjected to prior evaluation by the Advisory Ethics Committee for Animal Experimentation of the University of Zaragoza (License number PD03/15).

- **Practice 1.** Basic techniques of handling and restraining rodents: rat and mouse. Identification and sexing.
- **Practice 2.** Basic techniques of handling and restraining of lagomorphs used for animal experimentation: rabbit. Recognition of the main anatomical structures of small laboratory animals.
- **Practice 3.** Discussion of animal experimentation from a social perspective.

5.4.Course planning and calendar

Conducted lectures dates will be available on the website of the Faculty of Veterinary Medicine (link <http://veterinaria.unizar.es/>). This link will be updated at the beginning of each academic year.

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Conducted practicals dates will be announced in advance, so that the students choose the best date that suits them. The approximate dates of the practices will be as follows:

Practice 1: Third week of October

Practice 2: Fourth week of October

Practice 3: During November

5.5. Bibliography and recommended resources

BB Ciencia y tecnología del animal de laboratorio : formación avanzada de postgrado / Jesús Martín Zúñiga, José M^a Orellana Muriana, Josep Tur Marí . [Alcalá de Henares] : Universidad de Alcalá ; [Madrid] : SECAL, 2008

BB Illera Martín, Mariano. Trabajar en experimentación animal / Mariano Illera Martín Madrid : Fundación Universidad-Empresa, 1989

BB Introducción a la experimentación con animales / editores , José Rodríguez Martínez, Ma Dolores Hernández Lorente, Jorge de Costa Ruiz . 1a ed Murcia : Universidad de Murcia, Servicio de Publicaciones, 2001

BB Introducción a la experimentación y protección animal / Coordinado por Carlos César Pérez García, M. Inmaculada Díez Prieto, Paulino García Partida . León : Universidad de León, Secretariado de Publicaciones , 1999

BB Vaquero Puerta, Carlos. Manual de experimentación animal / Carlos Vaquero Puerta . [1a. ed.] Valladolid : Secretariado de Publicaciones, Universidad de Valladolid, D.L. 1993

BC Giráldez Dávila, Alberto. Breve historia de la experimentación animal / por Alberto Giráldez Dávila . Madrid : Real Academia Nacional de Farmacia , 2008 [Para acceder al texto completo mirar URL]

BC Granada, J. M.. Principios de la ciencia del animal de laboratorio: una contribución al empleo y a la calidad de los resultados experimentales. Secal, 1999

BC Laroche, M. J.. Les animaux de laboratoire. Ethique et bonnes pratiques. Paris :Masson, 1990

BC Management of laboratory animal care and use programs / edited by Mark A. Suckow, Fred A. Douglas, Robert H. Weichbrod . Boca Raton [etc.] : CRC Press, cop.2002

BC Mateos Montero, Concha. Bienestar animal, sufrimiento y consciencia / Concha Mateos Montero ; prólogo de Jesús Mosterín . Cáceres : Universidad de Extremadura. Servicio de Publicaciones, 2003

BC Sáiz Moreno, Laureano. Animales de laboratorio : (producción, manejo y control sanitario) / por Sáiz Moreno, L., García de Osma, J.L. y Compaire Fernández, C. . Madrid : Instituto Nacional de Investigaciones Agrarias, 1983

BC Textos legales sobre experimentación animal / edición preparada por José María Pérez Monguió . Cádiz : Universidad de Cádiz, 2003

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LISTADO DE URLs:

Comisión ética asesora para la experimentación animal. Universidad de Zaragoza. - [<http://cea.unizar.es>]

European Society of Laboratory Animal Veterinarians (ESLAV). - [<http://www.eslav.org/>]

Federation of European Laboratory Animal Science Associations (FELASA). - [<http://www.felasa.eu/>]

Giráldez Dávila. Breve historia de la experimentación animal. Madrid : Real Academia Nacional de Farmacia,2008 - [<http://www.analesranf.com/index.php/lectur/issue/view/20>]

ILAR Journal (Institute for Laboratory Animal Research). - [<http://ilarjournal.oxfordjournals.org/>]

Revista Laboratory animals (UK) - [<http://la.rsmjournals.com/>]

Sociedad Española para las Ciencias del Animal de Laboratorio (SECAL). - [<http://www.secal.es/>]