

Course guide 390344 - PAM - Monogastric Animal Production

Last modified: 07/03/2024

Unit in charge:

Barcelona School of Agri-Food and Biosystems Engineering

745 - DEAB - Department of Agri-Food Engineering and Biotechnology.

Degree:

BACHELOR'S DEGREE IN AGRONOMIC SCIENCE ENGINEERING (Syllabus 2018). (Optional subject).

Academic year: 2023

ECTS Credits: 6.0

Languages: Catalan

Others: Alvarez Del Castillo, Lorenzo Contreras Jodar, Alexandra

TEACHING METHODOLOGY

The methodological approach will be focused on the development of the subject on both theoretical and practical levels. Hence, the syllabus will consist on:

-Lectures (large groups). The professor will introduce the basic concepts and will seek the students involvement through case study presentations and readings aiming at relating and assimilating the basic theoretical concepts shown.

-Workshop sessions in sessions in small groups to carry out activities in the computer lab.

-Visits to investigation centres and commercial farms.

Students will have available support documents for lectures, supplementary material and references to complementary readings in Atenea.

LEARNING OBJECTIVES OF THE SUBJECT

The subject must provide the bases of avian species, pigs, rabbits and bees production. For this reason, the subject will focus on the fundamental pillars of animal production: nutritional and productive management, facilities, reproduction physiology and reproductive management, pathology, biosecurity, genetic selection and waste management for each specie. Thus, the objectives are as follows:

- Know the most common production systems in the European Union (EU). The state of the sector for each monogastric specie, as well as the most used breeds, lines and commercial hybrids related to their productive destination.

- Nutritional management according to the physiological and productive stage of each species.
- Evaluate the animal welfare conditions on a farm and have knowledge of the EU animal welfare and biosafety laws for each species.
- Be able to distinguish the reproductive cycles and their management on farms.
- Achieve basic knowledge of both quantitative and molecular animal genetics.
- Evaluate, analyze and interpret both productive and economic indices applied in the different species.
- Understand the environmental footprint of an operation, as well as the management of the generated waste.

STUDY LOAD

Туре	Hours	Percentage
Hours small group	20,0	13.33
Hours large group	40,0	26.67
Self study	90,0	60.00

Total learning time: 150 h



CONTENTS

Monogastric farming sector

Description: Sector analysis of avian species, swine, rabbits and bees

Related activities: Activity 1: Lectures

Full-or-part-time: 4h 30m Theory classes: 2h Self study : 2h 30m

Poultry production

Description:

Ethnology and applied genetics Management particularities in production and reproduction Housing and waste management Behaviour and UE legislation on animal welfare protection Pathologies and biosecurity

Related activities:

Activity 1: Lectures Activity 2: Written exams Activity 3: Feed rationing Activity 4: Visiting research centers and farm facilities

Full-or-part-time: 63h

Theory classes: 16h Practical classes: 7h Self study : 40h

Swine production

Description:

Ethnology and applied genetics Management particularities in production and reproduction of white and Iberian pigs Housing and waste management Behaviour and UE legislation on animal welfare protection Pathologies and biosecurity

Related activities:

Activity 1: Lectures Activity 2: Written exams Activity 3: Feed rationing Activity 4: Visiting research centers and farm facilities

Full-or-part-time: 61h Theory classes: 12h Practical classes: 13h Self study : 36h



Rabbit production

Description: Ethnology and applied genetics Management particularities in production and reproduction Housing Pathologies

Related activities: Activity 1: Lectures Activity 2: Written exams

Full-or-part-time: 15h Theory classes: 6h Self study : 9h

Bee production

Description:

Ethology Management particularities Honey, royal jelly and bee propolis production Pathologies and predators

Related activities: Activity 1: Lectures Activity 2: Written exams

Full-or-part-time: 4h 30m Theory classes: 2h Self study : 2h 30m

ACTIVITIES

Activity 1: Lectures

Description: Lectures

Full-or-part-time: 113h Theory classes: 38h Self study: 75h



Activity 2: Written exams

Description:

Individual assessment consisting on two written exams on the topics covered.

Specific objectives:

Assess the theoretical learning of the subject to ensure the student has acquired the specific concepts and their associated skills.

Material:

Rubric exams.

Delivery:

The exams will take place once the corresponding theoretical topics have been covered. Each exam will account for 35% of the final grade of the subject.

Full-or-part-time: 2h

Theory classes: 2h

Activity 3: Feed rationing

Description:

In two 3-hour computer room sessions, the basis of a feed rationing program will be shown in order to design feed rations for poultry and pigs.

Material:

Feed rationing softwares

Delivery:

The student must submit a document regarding the feed rations proposed for poultry and pigs.

Full-or-part-time: 13h 30m Laboratory classes: 6h Self study: 7h 30m

Activity 4: Visiting research centers and farm facilities

Full-or-part-time: 21h 30m Practical classes: 14h Self study: 7h 30m

GRADING SYSTEM

The final grade of the subject (Nfinal) will be given by weighting the exams and assignments:

N1: two evaluation test qualification (35% each)

N2: feed rationing assignment qualification (activity 3).

N3: literature review and its oral presentation.

Nfinal=0.35 N1 + 0.15 N2 + 0.15 N3



BIBLIOGRAPHY

Basic:

Buxadé Carbó, Carlos. La Gallina ponedora : sistemas de explotación y técnicas de producción. 2ª ed. actualizada y ampliada.
 Madrid: Mundi-Prensa, 2000. ISBN 8471148803.

- Castelló Llobet, José A; Lleonart Roca, Francesc. Curso de avicultura. Arenys de Mar: Real Escuela Oficial y Superior de Avicultuke, DL 1975. ISBN 8440091192.

- Jean-Prost, Pierre; Medori, Paul. Apicultura : conocimiento de la abeja : manejo de la colmena. 4 ed. rev., y ampliada, por Carlos de Juan. Madrid: Mundi-Prensa, 2007. ISBN 9788484762041.

- Castelló, José A. Producción de carne de pollo. 2ª ed. Arenys de Mar (Barcelona): Real Escuela de Avicultura, 2002. ISBN 8492097841.

- McGlone, John; Pond, Wilson G. Pig production : biological principles and applications. Australia [etc.]: Thomson/Delmar Learning, cop. 2003. ISBN 082738484X.

- López Coronado, José Alfredo. Crianza, producción y comercialización de conejos : cunicultura. Primera edición. Lima: Empresa Editora Macro, abril de 2014. ISBN 9786123042042.