

28429 - Integration: Ruminants

Información del Plan Docente

Academic Year	2017/18
Faculty / School	105 - Facultad de Veterinaria
Degree	451 - Degree in Veterinary Science
ECTS	14.0
Year	4
Semester	Annual
Subject Type	Compulsory
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:

Lectures, practices, visits to livestock farms and team works

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- Lectures: 115 hours, including an introduction class and presentation of the subject. Theoretical lessons will be taught in the lecture room, being the students divided into two groups.

- Practice lessons (I): 52 hours. These will be given at the Animal Research Service teaching room of the Veterinary Faculty; at the Research Centre of the Aragón Government (CITA); at the regional Slaughter House: Mercazaragoza; at the computer room; at the teaching laboratories of Infectious, Parasitic Diseases and Animal Production and at the necropsies room.

Practices are divided into 10 sessions of 1 to 3 hours long, received by groups of 6-8 students and 13 sessions of 1 to 1.5 hours long, received by groups of 12-14 students. A work explanation will be given at the beginning of the lesson. The students will do the practice under the professor's supervision afterwards. The students will have guide notes and specific materials for its understanding and execution.

- Practice lessons (II) 8 hours: 2 seminars (the whole group), a cattle prospecting work (groups of 2- 4 students) and a visit to a bovine or ovine livestock farm.

5.2.Learning tasks

5.3.Syllabus

LECTURE SESSIONS

This programme consists of 80 topics to teach in 115 contact hours participatory lecture, distributed in 1-hour sessions.

0- Introduction and subject presentation

1- Cattle livestock sector in Spain and UE: census, distribution, productions and demand. Marketing and support policies.

2- Reproductive control

3- Reproductive failure

4- Female reproductive tract pathologies

5- Male reproductive tract pathologies

6- Abortions I

7- Abortions II

8- Calving cares, obstetrics problems and retained placenta

9- Use of reproductive technologies

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Beef cattle

10- Meat production in extensive systems: Justification. Problems. Reproductive management. Production models: high mountain areas. Grasslands. Plateau areas. Humid areas.

11- Grasslands and forages: main types in bovine and ovine systems. Stocking rates of each type. Grazing systems and their advantages and disadvantages.

12- Meat production in intensive systems: Types of production. Veal, beef, mutton, ox. interest.

13- Artificial lactation

14- Beef cattle and beef cows feeding: growing and fattening periods. Feeding during reproduction.

15- Growth promoters and terminators: Types of products. Effects. Consequences in carcass and meat. Interest and problems.

16- Carcass and meat quality: Concept. Carcass performance. Conformation. Composition. Carcass classification. Main parameters of meat quality.

17- Facilities: General Designs (free housing and communal boxes). Complementary facilities. Facilities for fodder

18- Goals and criteria of breeding. Analysis of the traits.

19- Breeding schemes. Genetic evaluation of candidates for selection.

Dairy cattle

20- General characteristics: Milk production systems. Structure. Animal bought. Lactation curves

21- Productive and reproductive management: characteristics. Goals. Postnatal cares. Replacement. Livestock farm control. High-production cattle management.

22- Milk production: factors that influence. Milking: phases, times and hygienic conditions

23- Dairy cattle feeding

24- Housing and Facilities: Characteristics. Types of stabling. Facilities for breast-fed calves. Facilities for distribution of food and water. Milking rooms.

25- Nipple diseases and udder oedema

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26- Clinical udder inflammation in cattle

27- Subclinical udder inflammation in cattle

28- Control of udder inflammation in cattle

29- Organization of genetic improvement. Breeder's associations. Goals and criteria of selection.

30- Analysis of the traits. Genetic evaluation of candidates for selection.

31- Biotechnology and genomic selection.

Sheep and goat

32- Management of cattle and sheep farming systems. Technical and economic indicators and farm sustainability.

33- Sheep and goat livestock sector in Spain and Europe: census, distribution, productions and demand. Marketing and support policies.

34- Management systems: intensive and extensive. Types. Differences. Trashumance.

35- Reproductive management: Calendars and systems. Use of hormonal and non-hormonal treatments and ram effect.

36- Lamb management: first cares. Artificial rearing. Weaning. Fattening. Replacement

37- Dairy sheep: Reproductive management. Milking. Drying-off

38- Feeding of growing and fattening lambs

39- Feeding of the meat- and milk-producing ewe

40- Meat and dairy sheep facilities: General Designs. Complementary facilities. Milking rooms.

41- Clinical udder inflammation in small ruminants (agalactia).

42- Control of udder inflammation in small ruminants

43- Goals and criteria of genetic improvement in sheep meat. Analysis of the traits.

44- Breeding schemes in sheep meat. Genetic evaluation of candidates.

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45- Breeding schemes in sheep and goat milk. Genetic evaluation of candidates.

46- Environmental benefits of the ruminant systems.

Clinical training and animal welfare

47- Systemic diseases of cattle.

48- BVD and other pestivirus diseases.

49- Diseases subject to official campaigns and notifiable diseases in cattle.

50- Systemic and emerging diseases of small ruminants.

51- Health campaigns and notifiable diseases in small ruminants.

52- Upper respiratory tract diseases.

53- Lower respiratory tract diseases in cattle.

54- Lower respiratory tract diseases in small ruminants.

55- Diseases affecting oral, jaw, and esophageal.

56- Foodborne indigestion.

57- Functional Indigestions of rumen and reticulum.

58- Diseases of the Abomasum.

59- Enterotoxaemias and other clostridiosis.

60- Paratuberculosis.

61- Digestive tract parasitosis.

62- Metabolic and toxic origin diseases.

63- Parasitic diseases.

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64- Diseases of infectious etiology.

65- Encefalopathies.

66- Diseases associated with anemia and clotting disorders.

67- Diseases associated with hemoglobinuria-jaundice.

68- Urinary tract diseases.

69- Diseases caused by ectoparasites.

70- Skin diseases with other etiologies.

71- Lameness in cattle.

72- Lameness in small ruminants.

73- Neonatal diseases in lambs and kids.

74- Ecthyma (orf disease), Morel's disease and Caseous Lymphadenitis.

75- Diarrheal Syndrome in calves.

76- Diarrheal Syndrome in lambs and kids.

77- Respiratory Bovine Syndrome.

78- Caprine and Ovine Respiratory Complex.

79- Lameness in young animals.

PRACTICAL ACTIVITIES: 60 hours

Practices type I (at farms, slaughterhouse, laboratories, computer room and necropsies room) (52 hours)

Practices type II (seminars, clinical cases, works and visits to livestock farms) (8 hours)

Practices type I

Practice 1- Formulations of rations for:

- a) Growing beef cattle
- b) Dairy cattle
- c) Pregnant and lactating ewes and growing lambs

2- Computer management of information

a) Meat

b) Milk

3- Genetic management of a herd

4- Cost calculation and break-even analysis in dairy farms.

5- Ovine milking management

6- Carcass and meat quality

a) carcass

b) meat

7- Technical and economic indicators and sustainability assessment in meat sheep and beef cattle farms.

8 - Introduction to clinical practice

9 - Clinical cases and podiatry

10 - Applied ruminants reproduction

11- Clinical cases and diagnosis of respiratory diseases

12 - Clinical cases and diagnosis of digestive diseases

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13 - Mastitis

a) Clinical cases and diagnosis of udder diseases

b) Diagnosis of infectious udder diseases

14 - Examination and pregnancy diagnosis in ruminants

15 - Post mortem studies in ruminants

16 - Laboratory diagnosis of infectious diseases of the reproductive system. Joint clinical sessions: preparation and discussion of a report

17-- Laboratory of Parasitology I: intestinal parasites

18-- Laboratory of Parasitology II: lung parasites

19 - Joint clinical sessions: preparation and discussion of a report

20 - Presentation of the livestock research

Practices type II

Practice A; Fieldwork (livestock research)

Practice B; Visit to livestock farm (C1- Sheep and C2-Bovine) or taking part in the activity "trashumance"

Seminar I; Welfare programmes in small ruminants

Seminar II; Welfare programmes in cattle

The programme is enhanced by:

-- Study for the consolidation of knowledge. Preparation for the exams and requested works.

-- Tutorials

-- Taking tests and doing presentations.

5.4.Course planning and calendar

Lectures and work presentations calendar.

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Dates and key events of 4 th course subjects are described in detail in the Veterinary Faculty website (<http://veterinaria.unizar.es/gradoveterinaria/>). This link will be updated at the beginning of each academic year.

5.5.Bibliography and recommended resources

Bibliography related to this subject keeps updated in the library website:
<http://psfunizar7.unizar.es/br13/eBuscar.php?tipo=a>