



Universitat de Lleida

DEGREE CURRICULUM
**INFECTIOUS AND PARASITIC
DISEASES**

Coordination: ARMENGOL GELONCH, RAMON

Academic year 2021-22

Subject's general information

Subject name	INFECTIOUS AND PARASITIC DISEASES			
Code	100318			
Semester	2nd Q(SEMESTER) CONTINUED EVALUATION			
Typology	Degree	Course	Character	Modality
	Double bachelor's degree: Bachelor's Degree in Veterinary Medicine and Bachelor's Degree in Science and Production	2	COMPULSORY	Attendance- based
Course number of credits (ECTS)	9			
Type of activity, credits, and groups	Activity type	PRACAMP	PRAULA	TEORIA
	Number of credits	0.6	3	5.4
	Number of groups	6	2	1
Coordination	ARMENGOL GELONCH, RAMON			
Department	ANIMAL HUSBANDRY			
Teaching load distribution between lectures and independent student work	Hores presencials: 90 Hores no presencials: 135			
Important information on data processing	Consult this link for more information.			
Language	Català: 50 Castellà: 50			

Teaching staff	E-mail addresses	Credits taught by teacher	Office and hour of attention
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Learning objectives

Objectives of knowledge: The student that psas the subject must know the classification, epizootiology, pathogenesis, symptoms, lesions, vital cycles and diagnostic procedures of the main agents and infectious and parasitic processes of the production animals and pets.

Capacity objectives: The student that pass the subject must be able to:

1. Detect the loss of animal health in the early moments of the infection, and especially for the diseases of the Official Declaration.
2. Collaborate with health authorities and authorities on the prevention and control of parasitic and / or infectious outbreaks in farms and for pets.
3. Manage health programs established in farms and for pets.
4. Establish and maintain biosafety and prevention programs, generic and specific for the different infectious agents.

Competences

General skills

Strategic competences of the University of Lleida

Possess and understand knowledge in an area of study that starts from the base of general secondary education, and is usually found at a level that, although supported by advanced textbooks, also includes some aspects that involve knowledge from the avant-garde of your field of study

Apply their knowledge to their work or vocation in a professional manner and possess the skills that are

usually demonstrated through the elaboration and defense of arguments and the resolution of problems within their area of study

Ability to gather and interpret relevant data (normally within their area of study) to make judgments that include a reflection on relevant social, scientific or ethical issues

To be able to transmit information, ideas, problems and solutions to a specialized and non-specialized public)

Know how to develop those learning skills necessary to undertake further studies with a high degree of autonomy

Transversal competences of the degree

1. Interpret studies, reports, data and analyze them numerically.
2. Work alone and in a multidisciplinary team.
3. Understand and express yourself with the appropriate terminology.
4. Discuss and argue in various debates.
5. Analyze and evaluate the social and ethical implications of the professional activity.
6. Have a critical and innovative spirit.

Specific competences

Identify and apply clinical exploration methods and procedures, complementary diagnostic techniques and their interpretation, as well as identify and apply the fundamentals of Necropsy

Know the infectious and parasitic diseases of veterinary interest including its diagnosis and fight as well as apply the bases of Zoonoses and Public Health.

Identify technical measures and regulations for the prevention, control and eradication of animal diseases, know the methods of health promotion in animal groups, including wild animals, in order to obtain maximum economic performance in a social way, ethically and sanitarly acceptable

Assess and interpret the productive and health parameters of an animal group, considering the economic and welfare aspects

Other competences

1. Infectious and parasitic diseases of general veterinary interest of both pets and slaughter animals.
2. Promotion of health in animal groups, both company and wild, in order to obtain maximum health, welfare and maximum economic performance in a socially, ethically and sanitarly acceptable way
3. Technical measures and regulations for the prevention, control and eradication of animal diseases

Subject contents

INFECTIOUS DISEASES OF COMPANY ANIMALS:

The subject matter of this part is an important part of the base of the small animal clinic.

The theoretical agenda delves into the main infectious and parasitic processes that affect canine and feline species, exotic animals and equids. Its etiology, epidemiology and pathology are studied. We work the main clinical signs fundamental to establish a good differential diagnosis and the necessary tests to reach a definitive diagnosis.

The theory of the subject is classified in blocks. Each block represents a group of diseases that affects the same system. At the end of each block a differential diagnosis is established between the diseases exposed for the students to become familiar with the diagnostic protocols that are applied to daily clinical practice.

BLOCK 1 - Respiratory processes caused by infectious and parasitic agents of cats and dogs (1,5 h)

Topic 1 - Canine Respiratory Complex

Topic 2 - Feline respiratory complex

Topic 3 - Canine and Feline Dirofilariosis

. Differential Diagnosis Diseases Block 1

BLOCK 2 - Systemic processes caused by infectious and parasitic agents in the dog (1.5 h)

Topic 4 - Brom Disease

Topic 5 - Canine contagious hepatitis

Topic 6 - Leptospirosis

Topic 7 - Leishmaniasis

. Differential Diagnosis Disease Block 2

BLOCK 3 - Neurological processes caused by infectious and parasitic agents in the dog (1h)

Topic 8 - Rage

Topic 9 - Tetanus

. Differential Diagnosis Disease Block 3

BLOCK 4 - Systemic processes caused by infectious and parasitic agents in cats (2h)

Topic 10 - Toxoplasma

Topic 11 - Feline retroviruses: FIV, FeLV

Topic 12 - Feline infectious peritonitis

. Differential diagnosis diseases Block 4

BLOCK 5 - Digestive processes caused by infectious and parasitic agents (2h)

Topic 13 - canine parvovirus and feline panleukopenia

Topic 14 - Canine enteric complex - viral and bacterial etiology

Topic 15 - Digestive problems due to protozoa

Topic 16 - Digestive problems due to parasites

- Platelminthos

- Nematodes

Topic 17 - Canine papilloma

. Differential Diagnosis Diseases Block 5

BLOCK 6 - Infectious and parasitic diseases of cat and dog fur (2h)

Topic 18 - ectoparasites

- Fleas

- Ticks

- Mosquitos

- Mites - Sarnia

- Myiasis

Topic 19 - Bacterial infections - pyoderma

Topic 20 - Fungal infections - dermatophytes

. Differential Diagnosis Disease Block 6

BLOCK 7 - Infectious vector transmission diseases (2.5 h)

Topic 21 - Ehrlichiosis and Lyme Disease

Topic 22 - Mycoplasmosi

Topic 23 - babesiosis

Topic 24 - Hepatozoon canis

. Differential Diagnosis Diseases Block 7

BLOCK 8 - Reproductive and neonatal problems (1.5 h)

Topic 25 - Neonatal problems

Topic 26 - Reproductive system infection

Topic 27 - Infertility

. Differential diagnosis diseases Block 8

BLOCK 9 - Preventive medicine in pets - individual and collectivities (1h)

. Deparasitació internal and external

. vaccination programs

. European and international regulations on movement of animals

. Official veterinarian certificates

SEMINARS

1. Infectious and parasitic diseases of exotic animals (4h)

2. Infectious and parasitic diseases of equidae (4h)

PRACTICAL ACTIVITIES

The practical classes are designed to work in small groups all the information that a clinical veterinarian finds in daily practice and that he must know how to interpret.

1. Interpretation of the results of a blood analysis in infectious and parasitic diseases (1h)
 - . Interpret a blood count
 - . Information that provides the results of biochemistry
2. Preparation and interpretation of blood smears, serology and PCR (1h)
 - . Realization and interpretation of a blood smear
 - . What does PCR or positive / negative serology mean?
3. Sampling for diagnosis of dermal, digestive and respiratory problems (1h)
 - . Skin scrapings and skin cytology
 - . Coprologicos in digestive problems
 - . bronchoalveolar lavage
 - . Fluid collection, ascites

RUMINANT DISEASES:

Topic 1.- Diseases in ruminants, of viral etiology (4 h)

1. Foot-and-mouth disease. Malignant catarrhal fever. Ecthyme contagious. Bluetongue.
2. Bovine respiratory syndrome. Infectious bovine rhinotracheitis.
3. Bovine viral diarrhea. Infections by coronavirus and rotavirus.
4. Arthritis encephalitis caprine. Maedi Visna. Adenomatous ovine lung. Enzootic intranasal tumor. Enzootic bovine leukosis.

Topic 2 .- Diseases in ruminants, of bacterial etiology (4 h)

1. Contagious bovine pleuropneumonia. Pasteurellosis. Atypical pneumonia. Tuberculosis.
2. Clostridiosis colibacillosis. Salmonellosis. Paratuberculosis.
3. Mamitis Contagious agalactia Brucellosis. Leptospirosis Enzootic abortion. Fever Q.
4. Listeriosis Lymphadenitis caseosa. Bacterial carbuncle. necrobacil losis

Topic 3.- Diseases in ruminants, of parasitic etiology (3 h)

1. Dictiocaulosis. Protostrongilosis of small ruminants.
2. coccidiosis. Cryptosporidiosis. Digestive helminthiasis. Fasciolosis Dicroceliosis
3. Hydatidosis. Cenurosis Neosporosis Toxoplasmosis Sarcocistiosis cysticercosis
4. babesiosis. Theileriosis.
5. Scabies. Oestrosis Hypodermosis

AVIAN DISEASES

Item 1 .- Diseases of the avian respiratory system caused by infectious and parasitic agents (2h)

1. Infectious bronchitis
2. Pneumovirus infection
3. avian influenza
4. Avian infectious laryngotracheitis
5. Mycoplasmosis
6. Pasterellosis

Item 2 .- Diseases of the avian digestive system caused by infectious and parasitic agents (2 h)

1. ascariasis
2. campylobacteriosis
3. candidiasis
4. coccidiosis
5. colibacillosis
6. Salmonella losis
7. botulism
8. Necrotic enteritis

Topic 3.- Multisystemic avian infectious diseases (2 h)

1. Mareck-leucosis complex
2. Newcastle disease
3. Infectious avian anemia

4. Gumboro disease
5. Settlement Fall Syndrome (EDS)

SWINE DISEASES

- Topic 1. Application of serological diagnosis in pigs. Serological profiles (2 h)
- Topic 2.- Diseases of the relevant pigs in the reproductive phase (4 h)
- Topic 3.- Diseases of the relevant pigs in the lactation phase (2 h)
- Topic 4.- Diseases of the relevant pigs in the transition phase (2 h)
- Topic 5.- Diseases of the relevant pigs in the rearing and fattening phase (2 h)
- Unit 6. - Infectious and parasitic diseases of rabbits (2h)

1. Myxomatosis
 2. Tularemia
 3. Rabbit haemorrhagic disease
 4. Parasitosis
- Practical activities

Laboratory practices

Seminars

Simulation

Methodology

The teaching activity is structured into theory and practical sessions, according to the time schedule included in the course plan that is delivered on the first day of class.

1. Theoretical classes. The theory classes are based on sessions of lectures and are intended to present the subject of each topic.
2. Practical classes. The practices consist of laboratory sessions, seminars, practical cases, assessment of sick animals, in the necropsy room or on the farm. There may be some invited conference.

Students will have the teaching material of the course in the electronic dossier of the subject. Each stage of the case study will be complemented by an explanatory script with the objectives and procedures to be used.

Development plan

The calendar and development plan of each teacher will be found in the resources folder.

Evaluation

Sections	
PET ANIMALS	34%
RUMINANTS	22%
POULTRY	22%
SWINE	22%

- Within each section, the theoretical part will be worth 80% and the practical activity 20%.
- To pass each section, the final mark of the section must be equal to or greater than 5 out of 10.

- To pass the course, it will be necessary for ALL SECTIONS to have a grade equal to or higher than 5 out of 10.
- The FINAL GRADE of the subject: It will be the average of the marks of each section considering the proportions of each one of them.
- Recovery:
Only students that failed in some of the sections with less than 5 out of 10 will be eligible for recovery.
The student must recover those sections in which he has obtained a grade lower than 5 out of 10.
The grade after recovery will be a maximum of 5 out of 10 in the recovered section.

Students can't pass if:

1. They have not taken the course on a regular basis, attending all practical activities and participating in all the evaluation processes previously established (force majeure situations are considered, duly justified).
2. Those students who have incurred serious faults during the course of the subject; especially if these have happened in the development of the Practices. They are considered among others as serious faults for these purposes: fraud in the evaluation processes, attendance at practices with mental faculties diminished by the consumption of alcohol, drugs or narcotics, non-compliance with safety standards in laboratories or establishments externally visited, disregard for our hosts etc.

Bibliography

BASIC

Calnek B.W. ,1991 .Diseases of Poultry. Iowa State University Press,Iowa

Merck & CO, Inc, 2000. El manual Merck de Veterinaria. Océano grupo editorial, S.A. Barcelona Varios, 2006. Higiene y patología aviar. Real escuela de avicultura; Arenys de Mar, Barcelona Woernle H. 1994. Malalties de las aves. Editorial Acribia S.A. Zaragoza

Cordero del Campillo, M i Rojo Vazquez FA 2006. Parasitología General. McGraw-Hill Interamericana. Madrid.

Borchert, Alfred. 1964. Parasitología veterinaria; traducido del alemán por Miguel Cordero del Campillo. Zaragoza : Acribia.

COMPLEMENTARY

Blowey R.W. 1992 Atlas de autoevaluación en veterinaria Práctica, nº2 Animales de Granja. GRASS Ediciones, S.A. Barcelona.

Randall C.J. 1989. Malalties de las aves domésticas y de corral . Interamericana, McGraw- Hill. Herenda D.C., 1996. Poultry Diseases and Meat Hygiene (a color atlas). Iowa State University Press, Ames, Iowa

Boch, Joseph. 1982. Parasitología en medicina veterinaria. Buenos Aires : Hemisferio Sur, 1982

Castro Castellón, Ana T., 2004 Índice catálogo de protozoos parásitos en aves de cría y consumo, Madrid : UAM Ediciones,

Cordero del Campillo, Miguel. 1994. Índice-catálogo de zooparásitos ibéricos. León: Universidad, Secretariado de Publicaciones

Euzéby, Jacques, 1998. Les Parasites des viandes : épidémiologie, physiopathologie, incidences zoonosiques Paris : Tec & Doc Lavoisier,

Hendrix, Charles M., 1998 Diagnostic veterinary parasitology / Charles M. Hendrix, Oxford Blackwell science.

Ishikura H. 1998 Host response to international parasitic zoonoses : with 64 figures, including 38 in color Tokio : Springer, cop

Kassai, Tibor. 2002. Helminología veterinaria. Zaragoza : Acribia

Laboratorio Central Veterinario de Weybridge, 1973. Manual de técnicas de parasitología veterinaria. Zaragoza : Acribia,

Lombardero, Oscar J. 1990. Lecciones de parasitología : 60 ciclos biológicos de interés veterinario. Buenos Aires : Hemisferio Sur

Olsen, O. Wilford. 1977. Parasitología animal. II, Platelminfos, acantocefalos y nematelmintos Barcelona : Aedos, 1977

Thomson and A.J. Lymbery, 1995. Echinococcus and hydatid disease /edited by R.C.A. Wallingford : CAB International, cop.

WEBS

Universitat de Oklahoma: <http://www.cvm.okstate.edu/~users/jcfox/htdocs/clinpara/Index.htm>

Universitat de Pensilvania: <http://cal.vet.upenn.edu/projects/parasit06/website/index.htm>

ATLES DE PARASITOLOGIA

Carlo de Negri Foundation. Atlas of Medical Parasitology <http://www.cdfound.to.it/html/atlas.htm#atlas>