



Universitat de Lleida

DEGREE CURRICULUM  
**ALTERNATIVE AND EXOTIC  
ANIMAL HEALTH AND CLINICS**

Coordination: MORERA CELDA, NEUS

Academic year 2019-20

## Subject's general information

<b>Subject name</b>	ALTERNATIVE AND EXOTIC ANIMAL HEALTH AND CLINICS			
<b>Code</b>	100363			
<b>Semester</b>	1st Q(SEMESTER) CONTINUED EVALUATION			
<b>Typology</b>	<b>Degree</b>	<b>Course</b>	<b>Character</b>	<b>Modality</b>
	Double bachelor's degree: Bachelor's Degree in Veterinary Medicine and Bachelor's Degree in Science and Production	5	COMPULSORY	Attendance- based
<b>Course number of credits (ECTS)</b>	3			
<b>Type of activity, credits, and groups</b>	<b>Activity type</b>	PRALAB	TEORIA	
	<b>Number of credits</b>	1.5	1.5	
	<b>Number of groups</b>	8	1	
<b>Coordination</b>	MORERA CELDA, NEUS			
<b>Department</b>	ANIMAL HUSBANDRY			

## Teaching staff

Teaching staff	E-mail addresses	Credits taught by teacher	Office and hour of attention
MORERA CELDA, NEUS	neus.morera@ca.udl.cat	9,25	
VELILLA JÁNEZ, MARIA MONTSERRAT	montse.velilla@ca.udl.cat	3,5	

## Learning objectives

### Objectives

Students are expected to acquire both the knowledge and basic skills to provide exotic patients with adequate veterinary care and to advise their owners.

By the end of the course, students must have internalized the techniques which allow for clinical case resolution: Anamnesis, identifying relevant clinical signs, establishing a differential diagnosis and a diagnostic protocol based on it.

Specific objectives:

- Management and biology of the most common species in exotic pet practice.
- Performing a physical exam on exotic patients, identifying the most common routes for drug administration and sampling.
- Selection and interpretation of the routine diagnostic tests (hematology, radiology, etc.) from the standpoint of exotic pet medicine.
- Diagnosis and treatment of the most common diseases in exotic pet practice.
- Sedation and anesthesia of the most common species in exotic pet practice.
- Knowing the main sources of information in exotic pet medicine and surgery.
- Knowing the laws which concern exotic animal ownership.
- Develop and publicly defend a clinical case.

## Significant competences

### SKILLS

1. Prevention, diagnosis and group or individual treatment of animal diseases, especially zoonotic ones.
2. Knowledge of the laws which apply to all areas of the veterinary profession and public health.
3. Development of a respectful professional practice, with proper team building skills, an efficient usage of resources and a high quality management.
4. Executing and interpreting the results of physical examination, diagnostic tests, and post-mortem exam.

5. Identifying lesions and associating them to pathologic processes.
6. Knowing which medical, hygienic or dietetic treatment a sick animal needs and which diseases can affect groups.
7. Knowing infectious and parasitic diseases including their diagnosis and treatment and public health concerns.
8. Treating and managing animals in a safe and humanitarian way. Teach others how to perform these techniques appropriately.
9. Diagnosis of the most common diseases using the appropriate tests and instruments, and being able to use these instruments properly.
10. Being able to provide emergency care and first aid in exotic patients.
11. Being able to carry out a sedation and general and local anesthesia, and to recognize and prevent pain.

## Subject contents

### CONTENTS OF THE SUBJECT

Program (14h)

**T1** Introduction: Characteristics of exotic animal medicine and surgery.  
Legal aspects: CITES, invasive species and potentially dangerous animals.

#### UNIT A: FISH AND AMPHIBIANS

**T2** Introduction to fish and amphibian medicine and surgery

#### UNIT B: REPTILES

**T3** Anatomy and physiology of reptiles. Husbandry and its importance. Most common reptiles in exotic practice.

**T4** Common pathologies in chelonians and lizards.

**T5** Common pathologies in snakes. Reptile anesthesia and surgery.

#### UNIT C: BIRDS

**T6** Anatomy and physiology of birds. Most common species in exotic practice.

**T7** Digestive and reproductive pathology. Problems of the chick.

**T8** Skin and behavior problems

**T9** Anesthesia and surgery in birds

#### UNIT D: MAMMALS

**T10** Rabbits: Biology, husbandry and diet. Anatomy and physiology. Digestive pathology: acquired dental disease, gastrointestinal stasis, diarrhea.

**T11** Respiratory and reproductive pathology. Neurologic and urinary problems.

**T12** Ferrets: Biology, husbandry and diet. Anatomy and physiology. Infectious and digestive problems: Distemper, influenza, coronavirus, pyogranulomatous inflammation. Foreign body. Diarrhea. endocrine and cardiovascular problems, neoplasia.

**T13** Rodents: Anatomy and physiology. Most common pathologies.

**T14** Anesthesia and surgery in exotic mammals.

Practicals and seminars (16h)

P1-SEM- Collectivities and management of zoos.

P2- Pisces: Water analysis and interpretation of results. Sedation; handling and physical examination. Routine clinical procedures: injection points and means of administration of drugs, sampling (skin, blood, gills).

P3- Handling and physical examination of turtles. Sedation Routine clinical procedures: injection and administration of drugs, blood sampling points, esophageal probes. Anesthesia: Placement of an oesophagostomy probe. (2h)  
Reptile anatomy: Identify the anatomical structures of clinical and surgical importance. Approaches: plastrotomy, approach to the cavity pelvic cavity.

P4-SEM- Uses of UV light in exotic patients. Clinical cases

P5-SEM- Environmental enrichment in mammals, birds and reptiles.

P6- The laboratory: Urianalysis and urinary sediment. Direct fecal examination. Evaluation of blood smears.

P7-SEM- Clinical cases of imaging diagnosis in mammals, birds and reptiles.

P8-SEM- clinical cases students.

## Methodology

### Methodology:

The subject will be taught with lectures, practicals and seminars. During lectures the contents of the subject will be reviewed and student participation will be encouraged.

Practicals are intended to teach the anatomy of the main groups (birds, reptiles and mammals) from a clinical point of view, and to teach the basic management of exotic patients at the veterinary practice.

Seminars have a practical oriented content which complements lectures and practicals. Their contents are cross curricular (i. e., behavioral enrichment, uses of UV light) and practical, allowing the resolution of real clinical cases (i.e. diagnostic imaging). There will be two sessions of seminars in which students will be presenting a clinical case; these presentations will be public and will consist in a 15-minute presentation with a 5-minute question time.

The contents of the lectures and the practical guides will be published in the virtual campus

## Evaluation

### Evaluation

60% of the final mark will correspond to two partial exams (30% of the final mark each). These exams will consist of a true or false multiple choice test and short questions. Wrong answers in the multiple-choice test will be penalized.

30% of the final mark will correspond to the oral and written presentation of a clinical case, in pairs, during the corresponding seminar. Both the written presentation and oral presentation of the case will be evaluated.

10% of the final mark will correspond to the student's attitude at practicals and seminars.

At least 50% of the questions must be correct to pass the exam.

### Exam resits

- Students can retake only the partial exam that has been failed.
- Only students which have failed an exam can retake it.
- Ordinary or resit exams can only be taken by students who:

1. Have attended all practicals, taken all exams and presented the clinical case (exceptional situations will be considered as long as they are properly proven).

2. Have not shown serious misconduct during the course. Fraud during the evaluation process or disregarding the security guidelines in the laboratory are considered serious misconducts.

## Bibliography

### **Llibres/libros/boocks**

Bensignor, E., Chai, N., Hadjaje, C., Leguay, E., Risi, E., Schilliger, L., & Viaud, S. (2009). Dermatología de los NAC. Esteve veterinaria.

\*Campbell, T. (2015). Exotic Animal Hematology and Cytology, 4th Edition. Wiley.

\*Carpenter, J. W. (2013). Exotic Animal Formulary, fourth edition. ELSEVIER.

Montesinos, A. Ardiaca M. (2017). Guía de terapéutica en animales exóticos. Multimédica Ediciones Veterinarias

M.E. Krautwald-Junghanns; M. Pees; S. Reese; T. Tully (2014). Diagnóstico por imagen en animales exóticos. Multimédica Ediciones Veterinarias

(M.E. Krautwald-Junghanns; M. Pees; S. Reese; T. Tully (2010). Diagnostic Imaging of Exotic Pets: Birds, Small Mammals, Reptiles. Ed Schluetersche)

Wright K.M., Whitaker B.R. (2007). Amphibian Medicine and Captive Husbandry . Krieger Publishing Company.

Wildgoose, W.H. (2002). BSAVA Manual of Ornamental Fish, 2nd Edition. Wiley

\*Divers S., Stahl, S. (2019). Reptile Medicine and Surgery. 3rd edition. Saunders

McArthur S. (2004). Medicine and Surgery of Tortoises and Turtles. Wiley-Blackwell

Girling, S. J., & Raiti, P. (2019). BSAVA Manual of Reptiles, 3rd edition .Wiley.

\*Harrison G.J., Harrison L., Ritchie B. (1997). Avian medicine: Principles and applications. Wingers Publishing (Disponible online: [http://avianmedicine.net/publication\\_cat/avian-medicine/](http://avianmedicine.net/publication_cat/avian-medicine/) )

Harrison G. J., Lightfoot T. (2005). Clinical Avian Medicine vol I, II. Spix publishing (Disponible online: [http://avianmedicine.net/publication\\_cat/clinical-avian-medicine/](http://avianmedicine.net/publication_cat/clinical-avian-medicine/) )

Doneley B. (2016). Avian Medicine and Surgery in Practice: Companion and Aviary Birds, 2nd Edition. CRC Press.

\*Quesenberry, K. E., & Carpenter, J. W. (2012). Ferrets, Rabbits and Rodents clinical medicine and surgery. ELSEVIER.

Lewington J. (2007). Ferret Husbandry, Medicine and Surgery. 2nd Edition. Saunders

Harcourt-Brown,F., Chitty, J: (2013). BSAVA Manual of Rabbit Surgery, Dentistry and Imaging. Wiley.

Kebble, E., & Meredith, A. (2009). BSAVA Manual of rodents and ferrets. Wiley

**Revistes/ Revistas / Journals**

- Journal of Exotic Pet Medicine
- Veterinary Clinics of North America (exotic animal practice)
- Revista Pequeños Animales
- Journal of Avian Medicine and Surgery
- Journal of herpetology
- \*Bibliografia bàsica