

Academic Year/course: 2022/23

28441 - Clinical Practice: Small, Exotic and Equine Animals

Syllabus Information

Academic Year: 2022/23

Subject: 28441 - Clinical Practice: Small, Exotic and Equine Animals

Faculty / School: 105 - Facultad de Veterinaria

Degree: 451 - Degree in Veterinary Science

ECTS: 8.0

Year: 5

Semester: Annual

Subject Type: Compulsory

Module:

1. General information

1.1. Aims of the course

The aim of the course is to enable student to apply, in a real professional context, the knowledge and skills acquired in previous courses with respect to the clinic of the species whose individual pathologies are attended by the veterinarian: equine, dogs and felines and exotics.

These approaches and aims are aligned with the following Sustainable Development Goals (SDG) addressed in the 2030 Agenda of the United Nations (<https://www.un.org/sustainabledevelopment/>), in such a way that the acquisition of the learning goals of the subject will provide skills and competences to achieve this to some extent:

- **Goal 3: Good health and wellbeing:**
 - Target 3.3. Fight communicable diseases.
 - Target 3.4. Reduce non-communicable diseases and promote mental health.
- **Goal 4: Quality education:**
 - Target 4.7. Promote global education for sustainable development.
- **Goal 5: Gender equality:**
 - Target 5.5. Ensure women's full participation and equal opportunities.
- **Goal 8: Decent work and economic growth:**
 - Target 8.8. Protect labour rights and promote safe working environments.
- **Goal 10: Reduced inequalities:**
 - Target 10.2 Promote social, economic and political inclusion.
 - Target 10.3 Ensure equal opportunities.
- **Goal 12: Responsible production and consumption:**
 - Target 12.4. Responsible management of chemicals and waste.
 - Target 12.5. Reduce waste generation through prevention, reduction, recycling and reuse.
 - Target 12.8. Promote universal understanding of sustainable lifestyles.
- **Goal 13: Climate action:**
 - Target 13.3. Improve environmental education and awareness.
- **Goal 15: Life of land:**
 - Target 15.8. Prevent invasive species.
- **Goal 16: Peace, justice and strong institutions:**
 - Target 16.1 Reduce violence everywhere.

1.2. Context and importance of this course in the degree

The subject is developed in the context of the last year of the Degree, when the student has already received theoretical and practical clinical training and is prepared to apply it in the clinic. It is the right time to provide, under appropriate supervision, a

first clinical and practical experience.

1.3. Recommendations to take this course

It is recommended that the student has completed and passed all the pre-clinical subjects of the third year: Pharmacology and Pharmacotherapy, General Surgical Pathology, Surgery and Anesthesiology, Toxicology, General and Propaedeutic Pathology I and II, Diagnostic Imaging, General Pathological Anatomy and Reproduction and Obstetrics.

It is especially advisable that the student has completed and passed the fourth-year Integration subjects related to this practicum: Integration in companion animals, Equine Integration and Integration in aquatic and exotic animals.

To carry out the practical activities, it is necessary to follow some safety recommendations that must be taken into account. Students have all the information available in the following links, as well as in the ADD courses of each of the subjects:

<https://veterinaria.unizar.es/estudiantes/formacion-prevencion-riesgos-y-seguridad#normas>

<https://veterinaria.unizar.es/prevencion/protocolosespecificosveterinaria>

<http://patologiaanimal.unizar.es/medidas-de-seguridad>

2. Learning goals

2.1. Competences

Specific competences of the Veterinary Degree:

- Make use of knowledge and skills in clinical exploration and complementary diagnostic techniques, including diagnostic imaging and necropsies, to the differential diagnosis of the pathological processes of patients of the equine, canine, feline and exotic species.
- Make use of their knowledge and therapeutic skills, pharmacological, surgical or other, for the prevention and treatment of diseases and injuries of equine, canine, feline and exotic species.

Transversal competences

- Analysing, synthesizing, solving problems and making decisions in the veterinary clinical field.
- Working as a team, showing respect, appreciation and sensitivity to the work of the others.
- Performing an ethical behaviour in the exercise of their responsibilities towards the profession and society.
- Seeking, managing and communicating information related to the activity of the veterinarian.
- Applying the scientific method in professional practice, including evidence-based medicine.
- Recognising the need to keep the knowledge, skills and attitudes of professional competencies up to date through a process of continuous training.

1. Day One Competences

- 1.1 Understand the ethical and legal responsibilities of the veterinarian in relation to animals under his/her care, the environment, clients, policies and society.
- 1.2 Demonstrate knowledge of the organisation, management and legislation related to a veterinary business economics and employment rights.
- 1.3 Promote, monitor and maintain health and safety in the veterinary setting; demonstrate knowledge of systems of quality assurance; apply principles of risk management to their practice.
- 1.4 Communicate effectively with clients, the public, professional colleagues and responsible authorities, using language appropriate to the audience concerned and in full respect of confidentiality and privacy.
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- 1.5 Prepare accurate clinical and client records, and case reports when necessary, in a form satisfactory to colleagues and understandable by the public.
- 1.6 Work effectively as a member of a multi-disciplinary team in the delivery of services.
- 1.7 Understand the economic and emotional context in which the veterinary surgeon operates.
- 1.8 Be able to review and evaluate literature and presentations critically.
- 1.9 Understand and apply principles of clinical governance, and practise evidence-based veterinary medicine.
- 1.10 Use their professional capabilities to contribute to the advancement of veterinary knowledge and One Health concept, in order to improve animal health and welfare, the quality of animal care and veterinary public health.
- 1.11 Demonstrate ability to cope with incomplete information, deal with contingencies, and adapt to change.
- 1.12 Demonstrate that they recognise personal and professional limits, and know how to seek professional advice, assistance and support when necessary.
- 1.13 Demonstrate an ability of lifelong learning and a commitment to learning and professional development. This

includes recording and reflecting on professional experience and taking measures to improve performance and competence.

- 1.14 Take part in self-audit and peer-group review processes in order to improve performance.
- 1.15 Obtain an accurate and relevant history of the individual animal or animal group, and its/their environment.
- 1.16 Handle and restrain animal patients safely and with respect of the animal, and instruct others in helping the veterinarian perform these techniques.
- 1.17 Perform a complete clinical examination and demonstrate ability in clinical decision-making.
- 1.18 Develop appropriate treatment plans and administer treatment in the interests of the animals under their care with regard to the resources available.
- 1.19 Attend in an emergency and perform first aid in common animal species*.
- 1.20 Assess the physical condition, welfare and nutritional status of an animal or group of animals and advise the client on principles of husbandry and feeding.
- 1.21 Collect, preserve and transport samples, select appropriate diagnostic tests, interpret and understand the limitations of the test results.
- 1.22 Communicate clearly and collaborate with referral and diagnostic services, including providing an appropriate history.
- 1.23 Understand the contribution that imaging and other diagnostic techniques can make in achieving a diagnosis. Use basic imaging equipment and carry out an examination effectively as appropriate to the case, in accordance with good health and safety practice and current regulations.
- 1.24 Recognise signs of possible notifiable, reportable and zoonotic diseases as well as abuse and take appropriate action, including notifying the relevant authorities.
- 1.25 Access the appropriate sources of data on licensed medicines.
- 1.26 Prescribe and dispense medicines correctly and responsibly in accordance with legislation and latest guidance.
- 1.27 Report suspected adverse reactions through the appropriate channel.
- 1.28 Apply principles of bio-security correctly.
- 1.29 Perform aseptic procedures appropriately.
- 1.30 Safely perform sedation, and general and regional anaesthesia; implement chemical methods of restraint.
- 1.31 Assess and manage pain.
- 1.32 Recognise when euthanasia is appropriate and perform it with respect of the animal, using an appropriate method, whilst showing sensitivity to the feelings of owners and others, with due regard to the safety of those present; advise on disposal of the carcass.
- 1.33 Perform a systematic gross post-mortem examination, record observations, sample tissues, store and transport them.
- 1.34 Perform ante-mortem inspection of animals destined for the food-chain, including paying attention to welfare aspects; correctly identify conditions affecting the quality and safety of products of animal origin, to exclude those animals whose condition means their products are unsuitable for the food-chain.
- 1.35 Perform inspection of food and feed including post-mortem inspection of food producing animals and inspection in the field of related food technology.
- 1.36 Advise on, and implement, preventive and eradication programmes appropriate to the species and in line with accepted animal health, welfare and public health standards.

2.2. Learning goals

If the student completes the course successfully, they should be able to:

1. Know how to do the history and clinical exploration of the patients of the canine, feline, equine and main exotic groups.
2. Carry out differential diagnoses that include the most common diseases of dogs, cats, horses and the main exotic species, choosing the necessary complementary diagnostic techniques.
3. Collect and send the most common samples, with their corresponding report. To know how to interpret the results of the basic analytical techniques.
4. Perform and interpret the diagnostic tests by image used in the most frequent pathologies in these species.
5. Perform and interpret the results of the necropsy of these species.
6. Attend emergencies and perform first aid in dogs, cats and horses.
7. Indicate the most common medical and surgical treatments in these species, as well as the necessary hospital care.
8. Anaesthetize and provide analgesia to canine, feline and equine patients.
9. Perform the most common surgical techniques (surgical sterilization in dog/cat) and to know how to perform and

help, in the surgical environment.

10. Know how to identify a horse as well as the main pathologies of the locomotor system of the horse.
11. Know the most common surgical techniques on the horse's limbs as well as perform the main head blocks and surgical pathologies of the head .
12. Know how to search and manage clinical information and know how to transmit it to other professionals.

2.3. Importance of learning goals

The course does not aim to teach new contents, but to train the student through professional practice, constituting an essential preliminary step for the incorporation into working life of the future clinical veterinarian.

3. Assessment (1st and 2nd call)

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

The evaluation will be carried out in blocks, with the following % in the calculation of the final mark:

- Block 1. Internal Medicine and specialities (Small and exotic animals)
 - Written examination based on clinical cases 40%
- Block 2. Surgical Area (Small Animals):
 - Initial evaluation at the beginning of the internship 10%
 - Evaluation at the end of the practical sessions 15
- Block 3. Emergencies:
 - Written examination 4,5% + Written memory 0,5€
- Block 4. Necropsies:
 - Written examination 5%
- Block 5. Equine:
 - Written examination 25%

Block 1 (40%)

The student must present to the Coordinator his/her signature sheet completed by the teachers as proof that he/she has attended and taken advantage of each of the scheduled sessions.

The teacher may ask the student questions that allow him/her to check that he/she has reviewed the basic knowledge in order to make the most of the practice.

Evaluated learning results: 1, 2, 3, 4, 5, 6, 8 and 11.

Written examination based on clinical cases (one on internal medicine and three on different specialities).

It will take place on the official dates set by the centre in June and September. Learning outcomes assessed: 1,2,3,4,5,6 and 8

Block 2 (25%)

** Initial assessment at the beginning of the internship (10 %)*

On the first day of practice in this block, all students convened on practical theoretical knowledge of basic aspects of surgery and anesthesia will be evaluated. These contents will be available previously in the digital teaching ADD. During the presentation of the subject, they will be told that they should review these contents prior to the practical sessions as part of their personal work and that they will also be evaluated. With this objective, the teacher will carry out a theoretical-practical evaluation that allows him to assess the basic knowledge and skills necessary for the use of the practice. The student will be scored on 10 points out of the 100 that complete the subject.

** Evaluation at the end of the practical sessions (15 %)*

Students will be evaluated during the development of the last practice. Each student will be evaluated by means of a rubric to verify that they have acquired the learning results 9, 10 and 11 listed in section 2.2. of the teaching guide.

The student must obligatorily present to the Coordinator his signature sheet completed by the teachers as proof that he has attended and taken advantage of each of the scheduled sessions.

Evaluated learning results: 9 and 10.

The student must present to the Coordinator his/her signature sheet completed by the teachers as proof that he/she has attended and taken advantage of each of the scheduled sessions.

Block 3 (5%)

** Practice report (0.5%)*

The student will make an individual memory of the cases attended during the practice week that will be presented at the end

of these practices and assessed by the teacher.

Written examination based on clinical cases (4,5%)

It will be assessed by means of a written examination, which will be 5% of the final mark and which will take place together with the written examination of block 1.

The examination will include questions about clinical cases related to the emergency, ICU and hospitalisation protocols presented at the practices and which the student will have been able to practise voluntarily on duty shifts.

The student must present to the Coordinator his/her signature sheet completed by the teachers as proof that he/she has attended and taken advantage of each of the scheduled sessions.

Learning outcomes assessed: 7 and 11.

Block 4 (5%)

Block 4 will be evaluated by means of a written exam, which will suppose 5% of the final grade.

The examination will consist of cases of necropsies.

Learning outcomes assessed: 6

Block 5 (25%)

A theoretical-practical examination consisting on questions about the seminars of identification and basic radiology as well as the biomodel practices (transrectal palpation in corpses, nerve blocks and major interventions in the head and surgical techniques in extremities). Learning outcomes assessed: 10, 11 and 12.

The student must present to the Coordinator his/her signature sheet completed by the teachers as proof that he/she has attended and taken advantage of each of the scheduled sessions.

Valuation criteria and requirement levels

- 16 points out of 40 for the evaluation of block 1
- 10 points out of 25 for the evaluation of block 2
- 2 points out of 5 of the evaluation of block 3
- 2 points out of 5 of the evaluation of block 4
- 10 points out of 25 in the evaluation of block 5

In case the minimum in any of the blocks is not reached or if the average does not reach 50% of the final grade, the student will keep the grade of the approved blocks throughout the academic year, and should only be examined for suspended activities.

It will be necessary to have attended 90% of the internships. Otherwise, the student will have to take the global test, which will constitute 100% of his final grade. It will be a theoretical and practical global evaluation test in which clinical cases of the different species and specialties object of the subject must be solved.

Marking system:

According to the national regulation Law 1025/2003, 5th of September which lays down the European system of credits and marking system for the university degree.

0-4,9: FAIL.

5,0-6,9: PASS

7,0-8,9: GOOD (NT).

9,0-10: EXCELLENT (SB).

As the article 158 of the Statutes of the University of Zaragoza lays down, provisional grades will be displayed at least for 7 days and students will be able to review them on the date, time and place provided for that purpose.

4. Methodology, learning tasks, syllabus and resources

4.1. Methodological overview

The program offered to students to help achieve the expected results includes the following activities ...

4.2. Learning tasks

Practical tasks such as...

4.3. Syllabus

1. Block 1: General medical consultation and specialties (Dog and cat and exotic animals): 52,5 tutorials (face to face classes) and 28 h individual workload:

1.1. General medical consultation and specialties (Dog and cat)

Practical sessions on general medical consultations and medical specialties rooms of the HVUZ:

1.1.1 8 h in general (internal) medical consultation (4 h a day for 2 days).

1.1.2 37 h in medical specialties:

Two full weeks, 3 or 4 h/day by specialty:

Reproduction. 1 day, 4 h

Dermatology. 1 day, 4 h

Behavior medicine. 1 day, 4 h

Neurology. 1 day, 4 h

Cardiology. 1 day, 3 h

Endocrinology. 1 day, 4 h

Clinical Oncology. 1 day, 4 h

Urology. 1 day, 4 h

Ophthalmology. 1 day, 3 h

Odontostomatology. 1 day, 3 h

1.2. Medical care or surgery (Exotic animals) 7,5h

Practice sessions (medical care or surgery) of 3,75 h each with assistant professors.

2. Block 2: Surgical area (cat and dog): 32 tutorials (face to face classes) and 17 h individual workload:

8 days on two weeks (4 days a week), 4 h daily.

During these days, students will actively collaborate in anesthetic and surgical procedures to the extent that the case and the knowledge and skills of the student permit.

3. Block 3: Emergency, UCI and Hospitalization: 12 hours with tutorship and voluntary activities and 6,5 h individual workload

Emergency with tutorship:

3.1. Four practical sessions (two sessions of 3,5h, one session of 3h and one session of 2h), held in the emergency department, ICU and hospitalization of the HVUZ. The clinical cases that go to it will be attended during the time of development of the practices and in the periods in which there are no cases to attend, the following activities will be carried out:

- ? Introduction to emergencies
- ? ABC (Airway, Breathing, Circulation)
- ? Review of clinical cases admitted to the Intensive Care Unit (ICU)
- ? ICU operation
- ? Explanation of how patients are monitored and how their hospitalization sheet is carried out and interpreted
- ? Review of fluid therapy protocols
- ? Rehydration pattern
- ? Dose calculation
- ? How to supplement potassium
- ? Laboratory operation
- ? Interpretation of analytics
- ? Screening
- ? Ecofast
- ? CPR drill
- ? Empathy with the owner: Representation of clinical cases
- ? Review of how to perform basic sutures using biomodels
- ? Management of surgical instruments
- ? Protocol of action in an emergency case that goes with traumatic injury
- ? The following procedures will be performed on a cadaver
 - Intubation
 - Esophageal tube placement
 - Thoracic drainage tube placement
 - Urine drainage tube placement
 - Placement of peritoneal drainage tube

- Placement of nasogastric feeding tube
- How to drain a chest (with clinical case introduction)
- How to perform a puncture to decompress a twisted stomach

Presentation, discussion and evaluation of students' memories

Summary of cases of the week. Debate and resolution of possible doubts that may remain pending

Self-evaluation sheet review (See Annex 1)

Emergency voluntary Activities

3.2. Voluntary clinical assistance during HVUZ guard shifts tutored by HVUZ veterinary staff:

In a week:

- ? During the afternoon during the week (up to 19h)
- ? Overnight during the week (up to 24h)
- ? During the weekend (up to 16h)
- ? Localizable emergencies for a week

3.3. Assistance to HVUZ during non-school periods

Activity in which the student signs up to collaborate in the emergency support of the HCV during non-school periods.

4. Block 4: Necropsy sessions. 7,5 h on line and 5 h individual workload:

On line clinical sessions including the most frequent cases of canine / feline and equine from the HVUZ or referred by other veterinarian species.

5. Block 5: Horses. 22.5 face to face hours and 12 h individual workload:

5.1. Hospital clinical practices: in the area of Large Animal HVUZ.

- 3.5 h with equine patients *
- 8.5 h with biomodels:
- 1.5 h Transrectal examination training in equine cadaver preceded by a preparatory workshop.
- 3.5 h nerve blocks and major surgical interventions in the head **.
- 3.5 h surgical techniques limbs.

5.2. Outpatient practices in equestrian centers or stud farms (7 h) *

Ambulatory clinical equine patients cared for on an outpatient basis with assistant professors with mobile clinics. (Divided into two sessions of 3.5 hours each).

5.3. Seminars about equine identification and the main equine locomotor pathologies (2 h).

5.4. Supervised visits to equestrian centers to analyze real problems and a previous seminar about identification and reproduction (1.5 h).

Appendix 1

SELF APPRAISAL

Emergency practices, hospitalization and ICU

SURNAME NAME:

PRACTICE GROUP:

COURSE DATE:

COMPETITION

1. I know ABC

2. I am able to understand the hospitalization sheet of an animal

3. I am able to complete a hospitalization sheet

4. I know how the ICU works

5. Select the right fluid for each patient

6. Calculate a patient's rehydration pattern
7. I am able to use an infusion pump
8. I am able to calculate the dose of a drug
9. I am able to calculate a CRI
10. I know how to supplement potassium to a patient
11. I know the basic operation of the laboratory
12. I am able to interpret analytics
13. I am able to assess the severity of the urgencies and make a correct screening
14. I have the guidelines to know how to treat patient owners
15. I am able to perform basic suture patterns
16. I know how to handle surgical instruments correctly
17. I know how to act before a patient with a traumatic injury
18. I know what ecofast is and how it would be done
19. I know how CPR is performed
20. I am able to put an iv path
21. I know how to intubate a patient
22. I am able to place an esophageal tube
23. I am able to place a chest drain tube
24. I am able to place a urine drain tube
25. I am able to place a peritoneal drainage tube
26. I am able to place a nasogastric feeding tube
27. It would be able to drain a chest
28. You could perform a puncture to decompress a twisted stomach

4.4. Course planning and calendar

You can see more information in the official FVZ website.

4.5. Bibliography and recommended resources

<http://psfunizar10.unizar.es/br13/egAsignaturas.php?id=7523>