

VM4103: CONSERVATION, ZOO AND EXOTIC ANIMAL MEDICINE

Effective Term

Semester B 2024/25

Part I Course Overview

Course Title

Conservation, Zoo and Exotic Animal Medicine

Subject Code

VM - Jockey Club College of Veterinary Medicine and Life Sciences

Course Number

4103

Academic Unit

Veterinary Clinical Sciences (VCS)

College/School

Jockey Club College of Veterinary Medicine and Life Sciences (VM)

Course Duration

One Semester

Credit Units

3

Level

B1, B2, B3, B4 - Bachelor's Degree

Medium of Instruction

English

Medium of Assessment

English

Prerequisites

Completion of Year 4 courses with C grade or above

Precursors

Nil

Equivalent Courses

Nil

Exclusive Courses

Nil

Part II Course Details

Abstract

The course will provide approaches to the application of the principles of veterinary clinical medicine and clinical practice to the animal species more commonly kept in zoos, aviaries or aquaria or as exotic pets in institutional or domestic situations, and species commonly-encountered in the context of wildlife rescues. Taxonomic groups covered in this course will include mammals, birds and reptiles. Topics covered include principles and acceptable standards of welfare, appropriate methods of handling, physical and chemical restraint, collection of case histories, clinical examination, diagnostic techniques including imaging and sample collection, clinical presentation and clinicopathological findings of common clinical conditions, clinical disease management including therapeutics and exploration of veterinary roles in zoo, wildlife and exotic medicine.

Course Intended Learning Outcomes (CILOs)

CILOs		Weighting (if app.)	DEC-A1	DEC-A2	DEC-A3
1	Explain the roles of veterinarians in exotic animal management, welfare and rehabilitation and how veterinarians work with other professionals and stakeholders in this sector.		x	x	x
2	Demonstrate appropriate handling, as well as physical and chemical restraint methods to enable adequate and safe physical examination, diagnostic investigations, clinical assessment and management of common diseases for various exotic species.		x	x	x
3	Interpret clinical histories, physical examination findings and the results of diagnostic tests to be able to diagnose common disease conditions and construct medical and/or surgical therapeutic plans for species commonly kept in zoos, aviaries or aquaria or as exotic pets and wildlife.		x	x	x
4	Recognize the indications for different diagnostic imaging modalities and their application for diagnosis of common diseases of exotic species.		x	x	x
5	Understand the key principles of conservation medicine and rehabilitation of wildlife species.		x	x	x

A1: Attitude

Develop an attitude of discovery/innovation/creativity, as demonstrated by students possessing a strong sense of curiosity, asking questions actively, challenging assumptions or engaging in inquiry together with teachers.

A2: Ability

Develop the ability/skill needed to discover/innovate/create, as demonstrated by students possessing critical thinking skills to assess ideas, acquiring research skills, synthesizing knowledge across disciplines or applying academic knowledge to real-life problems.

A3: Accomplishments

Demonstrate accomplishment of discovery/innovation/creativity through producing /constructing creative works/new artefacts, effective solutions to real-life problems or new processes.

Learning and Teaching Activities (LTAs)

LTAs		Brief Description	CILO No.	Hours/week (if applicable)
1	Lectures	Students will gain an overview of the approaches to key issues in the medical, welfare, and conservational care of zoo animals and exotic species, in order to apply these approaches to their clinical practice.	1, 2, 3, 4, 5	21 hours total for the course
2	Field trips & practicals*	Students will apply the knowledge from the lectures and engage in the practices and procedures in welfare, veterinary medicine and preservation of exotic species.	2, 3, 4, 5	18 hours total for the course

Additional Information for LTAs

*Practical classes and field trips are COMPULSORY. Students can be absent from no more than one of these sessions per semester. Additional absence(s) from these session(s) constitute a course failure. Permission to make up missed practicals may be granted for excused absences only, and only where feasible (i.e., may not be possible for live animal classes). Unexcused absences do not entitle students to any make-up or alternative arrangements.

Assessment Tasks / Activities (ATs)

ATs		CILO No.	Weighting (%)	Remarks (e.g. Parameter for GenAI use)
1	Mid semester quiz (1 hour)	2, 3	40	
2	Oral presentation: Reptile disease	3, 4	10	Group presentation, grade shared between students
3	Oral presentation: Avian disease	3, 4	10	Group presentation, grade shared between students
4	Examination (2 hour)	1, 3, 4, 5		Weighting: 40%

Continuous Assessment (%)

60

Examination (%)

40

Examination Duration (Hours)

2

Additional Information for ATs

Students will pass the course if they reach an overall 50% mark or above.

Assessment Rubrics (AR)

Assessment Task

Mid semester quiz

Criterion

Outline appropriate restraint methods for various exotic species. Demonstrate a basic understanding of the general husbandry needs, nutrition, and the clinical anatomy and physiology of commonly encountered exotic animal species in clinical practice.

Discuss and demonstrate correct use of diagnostic equipment and methodologies in order to provide optimal and realistic work up options for exotic animals.

Describe the roles of veterinarians in exotic animal management, welfare and rehabilitation.

Recognise common disease conditions in exotic species.

Excellent (A+, A, A-)

Excellent in understanding and explaining the criterion, and exhibits a high level of comprehension of the material

Good (B+, B, B-)

Good in understanding and explaining the criterion, and exhibits a moderate level of comprehension of the material

Fair (C+, C, C-)

Fair in understanding and explaining the criterion, and exhibits a basic level of comprehension of the material

Failure (F)

Poor in understanding and explaining the criterion, and exhibits a low level of comprehension of the material.

Assessment Task

Oral presentation, Reptile diseases, Avian diseases

Criterion

Ability to research and develop a presentation on a common disease presentation in reptile and avian medicine. Ability to incorporate material from previous lectures, textbooks, and peer reviewed literature to effectively present the topic.

Demonstrate a sound understanding of the clinical disease pathology.

Excellent (A+, A, A-)

Will exhibit high competence in understanding, explaining, and integrating the knowledge in a presentation format

Good (B+, B, B-)

Will exhibit good competence in understanding, explaining, and integrating the knowledge in a presentation format

Fair (C+, C, C-)

Will exhibit basic competence in understanding, explaining, and integrating the knowledge in a presentation format

Failure (F)

Will exhibit lack of competence in understanding, explaining, and integrating the knowledge in a presentation format

Assessment Task

Examination

Criterion

Ability to describe the process of diagnosis clinical history taking, diagnostic imaging, surgical and medical treatment of diseases commonly encountered in wildlife and other exotic animal species.

Demonstrate a sound understanding of conservation options relevant to local and international contexts (e.g. rehabilitation programs for wildlife).

Excellent (A+, A, A-)

Will exhibit high competence in understanding, explaining, and integrating the knowledge in written format. Exhibits a high level of comprehension of the material

Good (B+, B, B-)

Will exhibit good competence in understanding, explaining, and integrating the knowledge in written format. Exhibits a moderate level of comprehension of the material

Fair (C+, C, C-)

Will exhibit basic competence in understanding, explaining, and integrating the knowledge in written format. Exhibits a basic level of comprehension of the material

Failure (F)

Will exhibit lack of competence in understanding, explaining, and integrating the knowledge in written format. Exhibits a low level of comprehension of the material.

Additional Information for AR

Mark Range

The following is the mark range for each letter grade that must be used for assessment of any examinations or coursework of BVM courses (VM- and GE-coded) offered by PH and VCS.

A+: ≥92%, A: ≥87-91.99%, A-: ≥82-86.99%, B+: ≥75-81.99%, B: ≥68-74.99%, B-: ≥61-67.99%, C+: ≥54-60.99%, C: ≥50-53.99%, F:<50%

Part III Other Information

Keyword Syllabus

Zoos, aviaries, aquaria, exotic pets, species, wildlife rescues, mammals, birds, reptiles, husbandry, management, animal welfare, restraint, handling, imaging, surgery, medicine, case history, clinical examination, differential diagnosis, clinical diagnosis, definitive diagnosis, sample collection, therapy, drugs, preventative medicine

Reading List

Compulsory Readings

Title	
1	Nil

Additional Readings

Title	
1	Doneley, B. (2010). Avian Medicine and Surgery in Practice. CRC Press, Baton Rouge.
2	Miller, R. and Fowler, M. (2015). Fowler's Zoo and Wild Animal Medicine. Elsevier, St Louis.
3	Mitchell, M. and Tully, T. (2009). Manual of Exotic Pet Practice. Elsevier, St Louis.

4	West, G., Heard, D, and Caulkett, N. (2014). Zoo Animal and Wildlife Immobilization and Anesthesia, 2nd edition. Wiley-Blackwell.
5	Divers SJ and Stahl SJ. Mader' s Reptile and Amphibian Medicine and Surgery, 3rd ed. Elsevier, 2019.