VCS5003: INTEGRATED SMALL ANIMAL MEDICINE: PART III

Effective Term
Semester A 2026/27

Part I Course Overview

Course Title
Integrated Small Animal Medicine: Part III

Subject Code
VCS - Veterinary Clinical Sciences
Course Number
5003

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
P5, P6 - Postgraduate Degree

Medium of Instruction
English

Medium of Assessment
English

Prerequisites
Nil

Precursors
Nil

Equivalent Courses
Nil

Exclusive Courses
Nil

Part II Course Details

Abstract

This course focuses on clinical-oriented medicine to equip general practitioners with additional knowledge to the already learnt basics in veterinary surgery and anaesthesia. It will strengthen the clinician' s ability to develop clinical reasoning to be able to assess small animals presented in a veterinary setting to diagnose and treat common medical disorders of dogs and cats, and hone their clinical competences in-line with international standards of veterinary practice (Day One Competences). The course is underpinned by principles of evidence-based practice and contextualised care.

A variety of teaching techniques are used, including lectures, tutorials and case discussions.

This part will focus on the two major areas: surgery and anaesthesia.

Course Intended Learning Outcomes (CILOs)

	CILOs	Weighting (if app.)	DEC-A1	DEC-A2	DEC-A3
1	Integrate knowledge of anatomy, physiology pharmacology and coexisting diseases to perform a pre-anaesthetic investigation, identify any required diagnostic interventions, formulate an anaesthetic plan and discuss and demonstrate its implementation and monitoring with a team-based approach.		x	x	x
2	Describe the mechanisms of action, dosage and clinical use of anaesthetic and analgesic drugs to ensure patient welfare and safety in the perianaesthetic period and discuss options to deal with complications that may arise.		x	x	x
3	Discuss and demonstrate correct use of anaesthetic equipment including maintenance, testing, safety checklists, record keeping and troubleshooting common equipment malfunctions.		x		
4	Compare and contrast species-specific anaesthesia considerations based on their pharmacological responses, anatomy, physiology and behaviour.		x		
5	Apply an understanding of the mechanisms of action of analgesics and formulate analgesia plans in different settings.		x	x	x
6	Identify fluid, electrolyte, and acid-base disturbances from clinical and laboratory findings and understanding of their underlying pathophysiological mechanisms.		x	x	x
7	Describe common surgical diseases, including their pathogenesis, pathophysiology, diagnostic investigation, treatment and prognosis.		x	x	
8	Apply data collection skills to be able to take and interpret comprehensive surgical histories for canine and feline patients that include background epidemiological information and specific history relevant to the presenting complaint.		x	x	

9	Evaluate patient histories, clinical examination findings, relevant laboratory findings and diagnostic imaging findings to develop differential diagnoses, and propose logical diagnostic investigations.			x	
10	Develop an appropriate treatment plan, considering the diagnosis, overall health of the animal and client resources.			x	x
11	Communicate surgical and non-surgical options available to owners including euthanasia and referral to a specialist considering the welfare of the animal, client resources and relevant veterinary legislation.			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	Lectures will provide some basic information but also specific clinical case-scenarios to improve evidence-based practise and clinical skills.	1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11	35 hours in total
2	Case discussions and tutorials	Case discussions will allow participants to work through real-life clinical cases, while tutorials provide insights into important clinical techniques and/or allow reflection and analysis on relevant clinical case material.	1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11	4 hours in total

Continuous Assessment (%)

0

Examination (%)

100

Examination Duration (Hours)

1.5

Assessment Rubrics (AR)

Assessment Task
Final Examination

Criterion
Integrate the clinical sciences of surgery and anaesthesia to establish a cognitive framework applicable to particular disease situations.

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

Describe the mechanisms of action, dosage and clinical use of common pharmacological agents used in the different disciplines, in order to select and administer suitable agents to ensure patient welfare and safety and discuss options to deal with adverse effects that may arise.

Excellent (A+, A, A-)
Excellent in understanding and ability to develop and explain differential diagnoses, definitive diagnoses, treatment options, and treatment plans.

Good (B+, B, B-)
Good in understanding and ability to develop and explain differential diagnoses, definitive diagnoses, treatment options, and treatment plans.

Fair (C+, C, C-)
Has basic understanding and ability to develop and explain differential diagnoses, definitive diagnoses, treatment options, and treatment plans.

Marginal (D)
Has minimal understanding and ability to develop and explain differential diagnoses, definitive diagnoses, treatment options, and treatment plans.

Failure (F)
Has poor to absent understanding and ability to develop and explain differential diagnoses, definitive diagnoses, treatment options, and treatment plans.

Part III Other Information

Keyword Syllabus
Animal health
Disease
Pathology
Anaesthesiology
Anaesthetic equipment
Anaesthesia considerations
Anaesthetic monitoring
Airway management
Clinical record keeping
Clinical reasoning

Fluid disturbances
Electrolyte disturbances
Acid-base disturbances
Fluid therapy
Constant rate infusion
Pain and analgesia
Pharmacology
Soft tissue surgery
Neurosurgery
Musculoskeletal
Radiology
Therapy

Reading List

Additional Readings

	Title
1	Veterinary Surgery: Small Animal, 2nd Edition (2-Volume Set) · by Spencer A. Johnston, Karen M. Tobias
2	Small Animal Surgery. Theresa W. Fossum. Elsevier
3	Veterinary Surgical Oncology, 2nd Edition · by Simon T. Kudnig, Bernard Séguin
4	Duke-Novakovski T. et al., 2016. BSAVA manual of canine and feline anaesthesia and analgesia Third., Quedgeley, Gloucester: British Small Animal Veterinary Association. 3rd edition
5	Gaynor, J.S. & Muir, W.W., 2009. Handbook of veterinary pain management 2nd ed., St. Louis, Mo.: Mosby/Elsevier.
6	Dugdale A. et al.2020. Veterinary anaesthesia: principles to practice, Wiley-Blackwell .2nd edition