VM4104: TRANSBOUNDARY ANIMAL DISEASES

Effective Term
Semester A 2025/26

Part I Course Overview

Course Title
Transboundary Animal Diseases

Subject Code
VM - Jockey Club College of Veterinary Medicine and Life Sciences
Course Number
4104

Academic Unit
Infectious Diseases and Public Health (PH)

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

Course Duration
One Semester

Credit Units
2

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
None

Equivalent Courses
None

Exclusive Courses
None

Part II Course Details

Abstract
Globalisation and global trade in livestock products have created new challenges for governments and international organisations (WOAH, WHO, FAO, WTO) in predicting, preventing and controlling transboundary diseases, which can be

defined as epidemic diseases which are highly contagious or transmissible and have the potential for very rapid spread, irrespective of national borders, causing serious socio-economic and public health consequences. These diseases may also constitute a constant threat to the livelihood of livestock farmers and also have a significant detrimental effect on national economics. Hong Kong has been at the epicentre of several transboundary animal diseases (TADs), notably avian influenza and has suffered economically as well as on a social level. It is imperative that veterinarians are taught to be aware of transboundary diseases and how to handle and control them if they should be detected in a controlled fashion. This course aims to enhance the technical, entrepreneurial, leadership and organisational skills of veterinarians involved in animal disease control, with a strong emphasis on epidemiology, exotic and epizootic disease, the role of government veterinary services, and health information systems.

Course Intended Learning Outcomes (CILOs)

	CILOs	Weighting (if app.)	DEC-A1	DEC-A2	DEC-A3
1	Be able to identify clinical signs, clinical courses, transmission potential and pathogens associated with TADs.		x	x	
2	Obtain relevant flock and herd history for suspected TADs and recommend surveillance, monitoring and control and prevention methodology for TADs.		x	x	x
3	Evaluate biosecurity procedures at production animal farms and make recommendations for implementation of best practice biosecurity protocols.		x	x	x
4	Apply animal disease control concepts including depopulation, ring vaccination, compartmentalisation, disposal techniques, infection control procedures and logistics planning for the management of TAD.		x	x	
5	Discuss the functions of world organisations, including WOAH, FAO, WHO and WTO, in international trade to scenarios involving TADs. Describe the risk analysis principles for trade, and the international and local regulatory implications of TADs.		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 engage in interactive lectures to define and differentiate the key concepts, characteristics, and drivers related to TADs.	1, 2, 3, 4, 5	16 hr in total
2	Practical *	Students will participate in group discussions to explore different TADs, analyse the factors influencing their emergence (whenever applicable), and discuss prevention methods and investigation strategies. Students will engage in hands-on activities, such as case studies or simulations, to recognize the importance of veterinarians' ability to effectively identify, manage, and control TADs in a controlled setting. Students will actively participate in Q&A sessions to clarify their understanding and share their insights on the practical applications of the material covered.	1, 2, 3, 4, 5	3 hr in total
3	Field trip *	Students will observe and critically analyse the border control procedures and processes for control of diseases at the HKJC Shatin Quarantine facilities, participate in a guided tour of the facilities to gain firsthand experience, and actively engage in a Q&A session to deepen their understanding of the practical implications and real-world applications of managing and containing TADs through effective border control.	3, 5	3 hr in total

4	Project presentation	Students will work in teams to select a specific TAD-related topic not covered in class and conduct comprehensive research to gain a thorough understanding of the topic. The presentation showcases the students' in-depth knowledge and practical insights into the control and prevention of diseases, engaging in discussions and receiving feedback to refine their ideas.	1, 2, 3, 4, 5	4 hr in total

Additional Information for LTAs

* The practical class and field trip are COMPULSORY. Absence from both sessions constitutes a course failure. Permission to make up missed practicals may be granted for excused absences only, and only where feasible. Make-up is not possible for the field trip. Unexcused absences do not entitle students to any make-up or alternative arrangements.

Assessment Tasks / Activities (ATs)

	ATs	CILO No.	Weighting (%)	Remarks ("-" for nil entry)	Allow Use of GenAI?
1	Group presentations	1, 2, 3, 4, 5	50	-	Yes

Continuous Assessment (%)

50

Examination (%)

50

Examination Duration (Hours)

2

Assessment Rubrics (AR)

Assessment Task

1. Group presentation

Criterion

Ability to research and present on an issue related to TADs demonstrating a deep understanding of TADs.

Excellent (A+, A, A-)

Displays high competency in developing a presentation and able to illustrate epidemiological concepts of TADs and the ability to link TADs with real-world issues

Good (B+, B, B-)

Displays good competency in developing a presentation and able to illustrate epidemiological concepts of TADs and the ability to link TADs with real-world issues

Fair (C+, C, C-)

Displays competency in developing a presentation and able to illustrate epidemiological concepts of TADs and the ability to link TADs with real-world issues. See additional information for AR regarding mark range below, as in the BVM programme only C+ and C grades are awarded

Marginal (D)

Not applicable for the BVM programme

Failure (F)

Lacks competency in developing a presentation and able to illustrate epidemiological concepts of TADs and the ability to link TADs with real-world issues

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Assessment Task

2. Final Exam

Criterion

Ability to compare and contrast attributes and concepts about TADs

Excellent (A+, A, A-)

Student achieve 82% or greater on the examinations

Good (B+, B, B-)

Student achieve 61% or greater on the examinations

Fair (C+, C, C-)

Student achieve 50% or greater on the examinations. See additional information for AR regarding mark range below, as in the BVM programme only C+ and C grades are awarded

Marginal (D)

Not applicable for the BVM programme

Failure (F)

Student achieve less than 50% on the examinations

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.

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

Part III Other Information

Keyword Syllabus

Zoonoses, emerging diseases, One Health, vectors, arboviruses

Reading List

Compulsory Readings

	Title
1	Foreign Animal Diseases 7th Ed. Committee on Foreign and Emerging Diseases of the United States Animal Health Association.
2	AUSVET plan. https://www.animalhealthaustralia.com.au/our-publications/ausvetplan-manuals-and-documents
3	WOAH Terrestrial and Aquatic Animal Health Codes.

Additional Readings

	Title
1	Nil