VM2001: ONE HEALTH

Effective Term
Semester A 2024/25

Part I Course Overview

Course Title
One Health

Subject Code
VM - Jockey Club College of Veterinary Medicine and Life Sciences
Course Number
2001

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
3

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

Medium of Instruction
English

Medium of Assessment
English

Prerequisites
Nil

Precursors
Nil

Equivalent Courses
Nil

Exclusive Courses
Nil

Part II Course Details

Abstract
The "One Health" approach is based on recognising the fundamental importance of a healthy and balanced global ecosystem and its biodiversity for the wellbeing of humans, and other animals. It highlights the essential role of the complex

interactions and interdependencies within our shared environment, emphasising the need for a holistic perspective when addressing challenges such as disease outbreaks, food safety/security and ecosystem conservation. This course will introduce students to these intricate relationships, prompting them to reflect on their roles as citizens and future veterinarians. Through lectures, tutorials, and field trips delivered by a multidisciplinary group of professionals from Hong Kong and overseas, participants will deepen their understanding and appreciation of these complex systems dynamics. This course establishes an intellectual framework which will be carried through and further developed throughout the curriculum.

Course Intended Learning Outcomes (CILOs)

	CILOs	Weighting (if app.)	DEC-A1	DEC-A2	DEC-A3
1	Explain the interrelatedness of the health of wild and domestic animals, humans and the environment using a systems approach	45	x	x	
2	Discuss veterinary and public health topics based on a One Health perspective	40	x	x	
3	Describe the ethical and legal responsibilities of the veterinary surgeon in relation to patients, clients, society and the environment	15	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 knowledge about the concepts of One Health, based on real-world problem scenarios	1, 2, 3	21 hours total
2	Tutorials	Students will engage in group discussions and investigative activities during tutorials on specific One Health topics	1, 2, 3	9 hours in total
3	Field Trips	Students will gain first-hand field experience in different One Health contexts while engaging with experts from different disciplines	1, 2, 3	6 hours in total

Assessment Tasks / Activities (ATs)

	ATs	CILO No.	Weighting (%)	Remarks (e.g. Parameter for GenAI use)
1	Quizzes	1, 2, 3	30	Three quizzes (10% each) in weeks 5, 9, and 13.
2	Assignment	1, 2, 3	20	Group assignment: Each group is expected to write an essay of less than 3000 words based on a selected topic. The essay should be submitted no later than one week after the course has ended. Late submissions and exceeding the word limit will result in penalties. The assignment will be divided into three stages, each of which will have to be submitted through the online system. Each stage will carry a proportional weight in determining the final grade for the assignment: a) Title and main objective (10%) b) Outline (20%) c) Final version (70%)

Continuous Assessment (%)

50

Examination (%)

50

Examination Duration (Hours)

2

Assessment Rubrics (AR)

Assessment Task

Quizzes/ Essay

Criterion

Develop an understanding of the interactions between animal and human populations, the environment, and the resulting complexity of the threats to their health.

Excellent (A+, A, A-)

Highly developed understanding of the complex interactions between animals, humans and the environment and the resulting complexity of the threats to their health.

Good (B+, B, B-)

Well-developed understanding of the complex interactions between animals, humans and the environment and the resulting complexity of the threats to their health.

Fair (C+, C, C-)

Shows a basic understanding of the complex interactions between animals, humans and the environment and the resulting complexity of the threats to their health.

Failure (F)

Shows lack of understanding of the complex interactions between animals, humans and the environment and the resulting complexity of the threats to their health.

Assessment Task

Final examination

Criterion

Demonstrate a thorough, overall understanding of the complexity of the interactions between animals, humans, and the environment

Excellent (A+, A, A-)

Able to demonstrate a highly competent understanding of the complexity of the interactions between animals, humans, and the environment.

Good (B+, B, B-)

Able to demonstrate a good understanding of the complexity of the interactions between animals, humans, and the environment.

Fair (C+, C, C-)

Able to demonstrate a basic understanding of the complexity of the interactions between animals, humans, and the environment.

Failure (F)

Unable to demonstrate a competent understanding of the complexity of the interactions between animals, humans, and the environment.

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

(An indication of the key topics of the course.)

One Health, Emerging Disease, Ecosystem health, Ecology, Sustainability, Biodiversity, Animals, Wildlife, Livestock, Companion Animals, Humans, Environment, Human behaviour, Interface, Complex systems, Systems thinking

Reading List

Compulsory Readings

	Title
1	Chapters 2, 3, 4 and 5 in: Zinsstag J et al. (2021). One Health – The theory and practice of integrated health approaches. 2nd edition. CABI International. Available as an online resource via the CityU library.
2	Prata JC et al., (2022). One Health. Integrated Approach to 21st Century Challenges to Health. Elsevier Science. Chapters 1 and 3. Available as an online resource via the CityU library.
3	Meadows D. (2015). Thinking in Systems, a Primer. Chelsea Green Publishing. Introduction and Chapter 1.

Additional Readings

	Title
1	Charron D.F. (2012). Ecohealth research on practice: Innovative applications of an ecosystem approach to health. IDRC, Canada (https://www.idrc.ca/en/book/ecohealth-research-practice-innovative-applications-ecosystem-approach-health)
2	Other chapters in: Zinsstag J et al. (2021). One Health – The theory and practice of integrated health approaches. 2nd edition. CABI International. Available as an online resource via the CityU library
3	Magouras I, Brookes VJ, Jori F, Martin A, Pfeiffer DU and Dürr S (2020): Emerging Zoonotic Diseases: Should We Rethink the Animal–Human Interface? Frontiers in Veterinary Science,2020 October 22, https://www.frontiersin.org/article/10.3389/fvets.2020.582743
4	Folke, C., Polasky, S., Rockström, J. et al. Our future in the Anthropocene biosphere. Ambio 50, 834–869 (2021). https://doi.org/10.1007/s13280-021-01544-8
5	Jianyong Wu, Lanlan Liu, Guoling Wang & Jiahai Lu (2016) One Health in China, Infection Ecology & Epidemiology, 6:1,33843, DOI:10.3402/iee.v6.33843
6	Russel RE et al. 2020. Principles and mechanisms of wildlife population persistence in the face of disease. Frontiers in Ecology and Evolution, 8:569016- doi.org/10.3389/fevo.2020.569016.
7	Other chapters on Prata JC et al., (2022). One Health. Integrated Approach to 21st Century Challenges to Health. Elsevier Science
8	Bron GM, Siebenga JJ, Fresco LO. (2023). In the age of pandemics, connecting food systems and health: A global One Health approach. In Braun, Afsana, Fresco and Hassan (eds.). Science and innovations for food systems transformation. Springer p.869
9	Chandio AA, Jiang Y, Amin A, Ahmad M, Akram W, Ahmad F. (2023). Climate change and food security of South Asia: fresh evidence from a policy perspective using novel empirical analysis. Journal of Environmental Planning and Management. 66(1): 169-190. doi.org/10.1080/09640568.2021.1980378
10	Other chapters in Meadows D. (2015). Thinking in Systems, a Primer. Chelsea Green Publishing