VM2001: ONE HEALTH

Effective Term
Semester A 2023/24

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 has evolved from earlier concepts which were associated with the contributions made by veterinarians to public health. It is based on recognising the influence of the complex interactions and inter-dependencies

between animals, humans and the environment, embedded within a recognition of the fundamental importance of a healthy and balanced global ecosystem and its biodiversity for the wellbeing of humans, and other animals. The course will introduce the students to these complex relationships, and encourage personal reflection with respect to their role as citizens and as veterinarians in this context. Through a combination of lectures, tutorials and field trips involving appropriate practitioners of One Health from Hong Kong, it will deepen the students' exposure to and appreciation of the subject matter. This course establishes an intellectual framework which will be carried through and touched upon throughout the curriculum.

Course Intended Learning Outcomes (CILOs)

	CILOs	Weighting (if app.)	DEC-A1	DEC-A2	DEC-A3
1	Demonstrate an understanding of the interrelatedness of wild and domestic animals, humans and the environment	45	x	x	
2	Analyse veterinary and public health topics using 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.

Teaching and Learning Activities (TLAs)

	TLAs	Brief Description	CILO No.	Hours/week (if applicable)
1	Lectures	Aspects of One Health explained	1, 2, 3	19.5 hours is total
2	Tutorials	Led group discussions/ investigations	1, 2, 3	10.5 hours in total
3	Field Trips	One Health practitioners and facilities	1, 2, 3	9 hours in total

Assessment Tasks / Activities (ATs)

	ATs	CILO No.	Weighting (%)	Remarks (e.g. Parameter for GenAI use)
1	Reports / Quizzes / Presentations	1, 2, 3	40	1. Three quizzes (10% each) in weeks 4, 7, and 12. 2. One essay (5%) based on a group work on selected topics to be submitted in week 12; delayed submission will be penalised. 3. Poster presentation associated with the One Health Day (5%) based on group work to be submitted in week 6-7; delayed submission will be penalised.

Continuous Assessment (%)

40

Examination (%)

60

Examination Duration (Hours)

2

Additional Information for ATs

A penalty of 5% of the total marks for the assessment task will be deducted per working day for late submissions, and no marks will be awarded for submissions more than 10 working days late.

Assessment Rubrics (AR)

Assessment Task

Field reports/ quizzes / presentations

Criterion

Develop an appreciation of the interactions between animal, human populations and the environment

Excellent (A+, A, A-)

Highly developed understanding of the complex interactions between animals, humans and the environment

Good (B+, B, B-)

Well developed understanding of the complex interactions between animals, humans and the environment

Fair (C+, C, C-)

Shows a basic understanding of the complex interactions between animals, humans and the environment

Failure (F)

Shows lack of understanding of the complex interactions between animals, humans and the environment

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, competent understanding of the complexity of the interactions between animals, humans, and the environment

Fair (C+, C, C-)

Able to demonstrate a basic competent 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

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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+	≥85%	C+	55-59.99%
A	80-84.99%	C	50-54.99%
A-	75-79.99%	F	<50%
B+	70-74.99%		
B	65-69.99%		
B-	60-64.99%		

Part III Other Information

Keyword Syllabus

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

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	Ottinger MA and Geisselman C. (2023). One Health meets the Exposome. Human, Wildlife and Ecosystem Health. Elsevier Science. Chapters 2 and 3. Available as an online resource via the CityU library.

3	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.

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	Cleaveland, S., et al. (2014). Ecology and conservation: contributions to One Health. Rev Sci Tech 33(2): 615-627.
7	Destoumieux-Garzón, D., et al. (2018). The One Health Concept: 10 Years Old and a Long Road Ahead. Frontiers in Veterinary Science 5: 14-14.
8	Other chapters on Ottinger MA and Geisselman C. (2023). One Health meets the Exposome. Human, Wildlife and Ecosystem Health. Elsevier Science.
9	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.
10	Gortázar C et al. 2007. Diseases shared between wildlife and livestock: a European perspective. European Journal of Wildlife Research, 53: 241. doi.org/10.1007/s10344-007-0098y
11	Other chapters on Prata JC et al., (2022). One Health. Integrated Approach to 21st Century Challenges to Health. Elsevier Science.
12	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
13	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