City University of Hong Kong
Course Syllabus

offered by Department of Infectious Diseases and Public Health
with effect from Summer Term 2019/20

Part I   Course Overview

Course Title: Infectious Disease Epidemiology

Course Code: PH8002

Course Duration: One semester

Credit Units: 2

Level: R8

**Medium of
Instruction:**   English

**Medium of
Assessment:**   English

Prerequisites:
(Course Code and Title)   Nil

Precursors:
(Course Code and Title)   Nil

Equivalent Courses:
(Course Code and Title)   Nil

Exclusive Courses:
(Course Code and Title)   Nil

Part II   Course Details

1.   **Abstract**

The emergence of infectious diseases affecting animals and humans is one of the most important and increasing threats for modern society, and that increase is strongly associated with economic development, globalisation and urbanisation. This course aims to provide postgraduate students with an introduction to the principles of infectious disease epidemiology and approaches to identifying risk factors of disease occurrence.

2.   **Course Intended Learning Outcomes (CILOs)**

No.	CILOs#	Weighting* (if applicable)	Discovery-enriched curriculum related learning outcomes		
			A1	*A2*	*A3*
1.	Demonstrate and understand the key epidemiological concepts associated with the spread of infectious diseases		✓	✓	
2.	Select an appropriate study design when confronted with an epidemiological research question and develop a detailed study protocol capable of answering the research question		✓	✓	✓
3.	Analyse and interpret data derived from epidemiological field studies		✓	✓	✓
4.	Perform descriptive and exploratory spatial analyses of infectious disease occurrence		✓	✓	✓

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 self-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.

3. Teaching and Learning Activities (TLAs)

TLA	Brief Description	CILO No. 1	2	3	4	Hours/week (if applicable)
Lectures	Lectures will provide fundamental concepts and principles of infectious disease epidemiology, design of epidemiological studies, analysis of epidemiological data and spatial analysis.	✓	✓	✓	✓	
Hands-on practical tasks	Hands-on problem-based group activities will be conducted to facilitate conceptual understanding. These will be combined with take-home assignments.		✓	✓	✓	
Take-home assignments and reports	Students will be provided with take home assignments in conjunction with the in-class practical projects.		✓	✓	✓	Out of classroom

4. Assessment Tasks/Activities (ATs)

Assessment Tasks/Activities	CILO No. 1	2	3	4	Weighting*	Remarks
Continuous Assessment: 70%						
Classroom assessment	✓	✓	✓	✓	10%	This assessment will be based on the student's class participation.
Assignments and reports		✓	✓	✓	60%	Tasks are designed to evaluate the understanding of different concepts learned in this course and the ability of applying them to realistic veterinary infectious disease problems.
Examination: (duration: 1.5 hours)	✓	✓	✓	✓	30%	This will cover all topics covered during the course.
					100%	

5.   Assessment Rubrics

Assessment Task	Criterion	Excellent (A+, A, A-)	Good (B+, B, B-)	Fair (C+, C)	Failure (F)
1. Classroom assessment	The comprehension of the contents in both the theoretical and practical parts.	High	Significant	Basic	Not reaching basic levels
2. Assignments	The ability to apply the techniques/tools learned/recommended in this course.	High	Significant	Basic	Not reaching basic levels
3. Examination	The comprehension of the principles of infectious disease epidemiology.	High	Significant	Basic	Not reaching basic levels

Part III Other Information

1. **Keyword Syllabus**

    epidemiology, epidemiological study design, epidemiological analysis, infectious diseases, descriptive spatial analysis, exploratory spatial analysis

2. **Reading List**

2.1 **Compulsory Readings**

1	Pfeiffer,D.U. (2010): Introduction to Veterinary Epidemiology. Wiley-Blackwell. 132pp. (out of print but copyright has been returned to the author and the text is therefore now available for free download **here**) https://www.researchgate.net/publication/305279557_Introduction_to_Veterinary_Epidemiology?channel=doi&linkId=5786613d08aef321de2c66c6&showFulltext=true Or https://ebookcentral.proquest.com/lib/cityuhk/detail.action?docID=707905
2	Pfeiffer,D.U., Robinson,T.P., Stevenson,M., Stevens,K.B., Clements,A.C.A. and Rogers,D. (2008): Chapters 1 to 3 in Spatial analysis in epidemiology. Oxford University Press, Oxford, UK, 208pp. (http://www.oxfordscholarship.com/view/10.1093/acprof:oso/9780198509882.001.0001/acprof-9780198509882)

2.2 **Additional Readings**

1	Sargeant,J.M., O'Connor,A.M., Dohoo,I.R., Erb,H.N., Cevallos,M., Egger,M., Ersboll,A.K., Martin,S.W., Nielsen,L.R., Pearl,D.L., Pfeiffer,D.U., Sanchez,J., Torrence,M.E., Vigre,H., Waldner,C. and Ward,M.P. (2016): Methods and processes of developing the strengthening the reporting of observational studies in epidemiology - veterinary (STROBE-Vet) statement. Prev Vet Med 134, 188-196. http://dx.doi.org/10.1016/j.prevetmed.2016.09.005.
2	O'Connor,A.M., Sargeant,J.M., Dohoo,I.R., Erb,H.N., Cevallos,M., Egger,M., Ersboll,A.K., Martin,S.W., Nielsen,L.R., Pearl,D.L., Pfeiffer,D.U., Sanchez,J., Torrence,M.E., Vigre,H., Waldner,C., Ward,M.P. (2016): Explanation and Elaboration Document for the STROBE-Vet Statement: Strengthening the Reporting of Observational Studies in Epidemiology - Veterinary Extension. Zoonoses Public Health. http://dx.doi.org/10.1111/zph.12315.
3	Jones,B.A., Sauter-Louis,C., Henning,J., Stoll,A., Nielen,M., Van Schaik,G., Smolenaars,A., Schouten,M., Uijl, I. den, Fourichon,C., Guatteo,R., Madouasse,A., Nusinovici,S., Deprez,P., De Vliegher,S., Laureyns,J., Booth,R., Cardwell,J.M. and Pfeiffer,D.U. (2013): Calf-level factors associated with bovine neonatal pancytopenia – A multi-country case-control study. PLoS One 8(12), e80619. http://dx.doi.org/10.1371/journal.pone.0080619.
4	Pfeiffer,D.U., Robinson,T.P., Stevenson,M., Stevens,K.B., Clements,A.C.A. and Rogers,D. (2008): Chapters 4 to 6 in Spatial analysis in epidemiology. Oxford University Press, Oxford, UK, 208pp. (http://www.oxfordscholarship.com/view/10.1093/acprof:oso/9780198509882.001.0001/acprof-9780198509882