

**City University of Hong Kong
Course Syllabus**

**offered by Department of Infectious Diseases and Public Health
with effect from Semester A 2024/25**

Part I Course Overview

Course Title:	<u>Infectious Disease Epidemiology</u>
Course Code:	<u>PH6202</u>
Course Duration:	<u>One semester</u>
Credit Units:	<u>3 credits</u>
Level:	<u>P6</u>
Medium of Instruction:	<u>English</u>
Medium of Assessment:	<u>English</u>
Prerequisites: <i>(Course Code and Title)</i>	<u>Nil</u>
Precursors: <i>(Course Code and Title)</i>	<u>Nil</u>
Equivalent Courses: <i>(Course Code and Title)</i>	<u>Nil</u>
Exclusive Courses: <i>(Course Code and Title)</i>	<u>Nil</u>

Part II Course Details

1. Abstract

Students will be introduced to the principles of infectious disease epidemiology, spatial analysis, and mathematical modelling of infectious diseases in this course. The emergence of infectious diseases affecting animals and humans is one of the most important and growing threat for modern society, strongly associated with economic development, globalisation and urbanisation.

2. Course Intended Learning Outcomes (CILOs)

(CILOs state what the student is expected to be able to do at the end of the course according to a given standard of performance.)

No.	CILOs	Weighting (if applicable)	Discovery-enriched curriculum related learning outcomes (please tick where appropriate)		
			A1	A2	A3
1.	Demonstrate an understanding of the key epidemiological concepts associated with the spread of infectious diseases		✓	✓	
2.	Develop simple mathematical models of infectious disease spread		✓	✓	✓
3.	Perform descriptive and exploratory spatial analyses of infectious disease occurrence		✓	✓	✓
		100%			

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.

3. Learning and Teaching Activities (LTAs)

(LTAs designed to facilitate students' achievement of the CILOs.)

LTA	Brief Description	CILO No.						Hours/week (if applicable)
		1	2	3				
Lectures	Students will be introduced to the fundamental concepts and principles of infectious disease epidemiology, mathematical modelling, and spatial analysis through lectures.	✓	✓	✓				
Hands-on practical tasks	Students will participate in hands-on, problem-based group activities to facilitate their conceptual understanding, which will be combined with individual tasks.		✓	✓				
Self-Directed Projects and Synthesized Submissions	Students will be provided with individual tasks in conjunction with the in-class practical projects.		✓	✓				Out of classroom

4. Assessment Tasks/Activities (ATs)

(ATs are designed to assess how well the students achieve the CILOs.)

Assessment Tasks/Activities	CILO No.					Weighting	Remarks
	1	2	3				
Continuous Assessment: <u>100%</u>							
Classroom assessment	✓	✓	✓			40%	Students will be assessed based on their class participation.
Assignments and reports		✓	✓			40%	Students will complete tasks designed to evaluate their mastery of the different concepts learned in this course and their ability to apply them to realistic veterinary infectious disease problems.
Group Presentation		✓	✓			20%	Students will complete tasks designed to evaluate their mastery of relevant research papers on infectious disease epidemiology.
Examination: _____ % (duration: _____, if applicable)						100%	

5. Assessment Rubrics

(Grading of student achievements is based on student performance in assessment tasks/activities with the following rubrics.)

Applicable to students admitted before Semester A 2022/23 and in Semester A 2024/25 & thereafter

Assessment Task	Criterion	Excellent (A+, A, A-)	Good (B+, B, B-)	Fair (C+, C, C-)	Marginal (D)	Failure (F)
1. Classroom assessment	The assessment of the contents in both the theoretical and practical parts.	High	Significant	Moderate	Basic	Not reaching basic levels
2. Assignments	The application of the techniques/tools learned/recommendeded in this course.	High	Significant	Moderate	Basic	Not reaching basic levels
3. Group Presentation	The demonstration of the principles of infectious disease epidemiology.	High	Significant	Moderate	Basic	Not reaching basic levels

Applicable to students admitted from Semester A 2022/23 to Summer Term 2024

Assessment Task	Criterion	Excellent (A+, A, A-)	Good (B+, B)	Marginal (B-, C+, C)	Failure (F)
1. Classroom assessment	The assessment of the contents in both the theoretical and practical parts.	High	Significant	Basic	Not reaching basic levels
2. Assignments	The application of the techniques/tools learned/recommendeded in this course.	High	Significant	Basic	Not reaching basic levels
3. Group Presentation	The demonstration of the principles of infectious disease epidemiology.	High	Significant	Basic	Not reaching basic levels

Part III Other Information (more details can be provided separately in the teaching plan)

1. Keyword Syllabus

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

epidemiology; dynamic disease modelling; mathematical modelling; infectious disease epidemiology; descriptive spatial analysis; exploratory spatial analysis

2. Reading List

2.1 Compulsory Readings

(Compulsory readings can include books, book chapters, or journal/magazine articles. There are also collections of e-books, e-journals available from the CityU Library.)

1.	Pfeiffer,D.U. (2010): Ch. 1 Introduction and Ch. 2 General epidemiological concepts. In Pfeiffer, D.U.: Introduction to Veterinary Epidemiology. Wiley-Blackwell. 13-32. (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.	Dohoo, W. Martin and H. Stryhn (2012): Introduction and causal concepts. Chapter 1. In I.R. Dohoo, W. Martin and H. Stryhn (eds): Methods in epidemiologic research. AVC Inc., Charlottetown, Prince Edward Island, Canada. 1-34 (PDF file can be downloaded from https://projects.upei.ca/mer/)
3.	Medley,G. and Dohoo,I. (2012): Concepts of infectious disease epidemiology. Chapter 25. In I.R. Dohoo, W. Martin and H. Stryhn (eds): Methods in epidemiologic research. AVC Inc., Charlottetown, Prince Edward Island, Canada. 753-778 (PDF file can be downloaded from https://projects.upei.ca/mer/)
4.	Sanchez,J. (2012): Analysis of spatial data. Introduction and visualization. Chapter 25. In I.R. Dohoo, W. Martin and H. Stryhn (eds): Methods in epidemiologic research. AVC Inc., Charlottetown, Prince Edward Island, Canada. 701-716 (PDF file can be downloaded from https://projects.upei.ca/mer/)
5.	Pfeiffer,D.U. (2012): Analysis of spatial data. Chapter 26. In I.R. Dohoo, W. Martin and H. Stryhn (eds): Methods in epidemiologic research. AVC Inc., Charlottetown, Prince Edward Island, Canada. 717-752 (PDF file can be downloaded from https://projects.upei.ca/mer/)

2.2 Additional Readings

(Additional references for students to learn to expand their knowledge about the subject.)

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.

	<p>(http://www.oxfordscholarship.com/view/10.1093/acprof:oso/9780198509882.001.0001/acprof-9780198509882)</p>
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