



**MMPH6167 Infectious disease epidemiology**

**Coordinator: Prof J Wu**

**Course Description:**

This course covers the fundamental concepts of infectious disease epidemiology and current methods for infectious disease surveillance and control. Topics include epidemiologic triangle, transmissibility and severity of infectious diseases, outbreak investigations and responses, infectious disease surveillance, vaccination, molecular epidemiology, and epidemic modelling. Exemplary cases with focus on recent emerging infectious diseases (e.g., COVID-19, SARS, pandemic influenza, avian influenza, MERS) will be used to facilitate students' learning.

**Pre-/Co-requisite:** (i) Proficiency in CMED 6100 Introduction to biostatistics or equivalent (including the calculation of confidence intervals and the use of maximum likelihood method); and (ii) proficiency in basic programming skills in R or equivalent (including the use of loops, conditional statements, and functions). Fulfillment of such pre-requisites before or during the course is solely the responsibility of the enrolled students. Enrolled students are expected to reinforce their knowledge and skills in these pre-requisites as needed on their own via free online courses such as R Programming on Coursera ( <https://www.coursera.org/learn/r-programming> ).

**Tutors/TAs:** Mr Zhenyu Wang/ Ms Chrissy Pang

**Term 2 (Wednesday)**

**Contact person:** Mr Zhenyu Wang

Date	Time	Lecture Topic	Lecturer	Venue
15 Jan 2025	6:30–9:30 pm	1. Introduction	Prof J Wu	TBC
22 Jan 2025	6:30–9:30 pm	2. Incubation period and severity	Prof J Wu	TBC
		Tutorial or Q&A		
12 Feb 2025	6:30–9:30 pm	3. Disease transmission	Prof J Wu	TBC
		Tutorial or Q&A		
19 Feb 2025	6:30–9:30 pm	4. Vaccination	Prof J Wu	TBC
		Tutorial or Q&A		
26 Feb 2025	6:30–9:30 pm	5. Disease surveillance	Prof K Leung	TBC
		Tutorial or Q&A		
05 Mar 2025	6:30–9:30 pm	6. Evaluating evidence	Prof K Leung	TBC
		Tutorial or Q&A		
12 Mar 2025	6:30–9:30 pm	7. Infectious disease modeling	Prof K Leung	TBC
		Tutorial or Q&A		
19 Mar 2025	6:30–9:30 pm	8. Sexually transmitted infections	Prof K Leung	TBC
		Tutorial or Q&A		
26 Mar 2025	6:30–9:30 pm	9. Vaccine safety and confidence	Prof J Wu	TBC
		Tutorial or Q&A		
02 Apr 2025	6:30–9:30 pm	10. Molecular epidemiology	Prof T Lam	TBC
		Tutorial or Q&A		
16 Apr 2025	6:30–9:30 pm	Final Test	-	TBC

**Course Assessment:**

Coursework: 70%  
Final Test: 30%

**Recommended Textbooks:**

Giesecke J. Modern Infectious Disease Epidemiology. Edward Arnold; 2001. ISBN: 0340764236.

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