



MMPH6206 Emerging infectious diseases and "one health"

Course Coordinator:	Prof. JSM Peiris/ Dr H Yen
Course Description:	Emerging infectious diseases continue to pose major threats to global public health, SARS, MERS, pandemic influenza, Ebola and Zika being recent examples. Many of these emerge through inter-species transmission from animals. The factors that contribute to emergence of such diseases and of other zoonotic diseases include environmental, ecological, societal, microbial and host factors. A "One Health" approach that envisions an integrated approach to enhancing the health of humans, animals and the environment is a paradigm relevant to responding emerging infections. This interactive course is designed for postgraduate students who are interested in understanding the factors that contribute to infectious disease emergence, their prevention, and control.
Venue:	TBC

Prerequisite: None

Term 2 (Thursday)

Contact person: Pavithra Daulagala

Date	Time	Topic	Lecturer	Format	Venue
11 Jan 2024	6:30 – 9:00 pm	1. Outbreak investigations	Dr. H-L Yen	Lecture	TBC
18 Jan 2024	6:30 – 9:00 pm	2. Emerging infectious diseases and the One Health approach	Prof. JSM Peiris	Lecture	TBC
25 Jan 2024	6:30 – 9:00 pm	3. From SARS to MERS and SARS-CoV-2	Prof. JSM Peiris	Lecture/ Discussion	TBC
01 Feb 2024	6:30 – 9:00 pm	4. Pandemic and zoonotic influenza	Dr. H-L Yen	Lecture/ Discussion	TBC
22 Feb 2024	6:30 – 9:00 pm	5. Vector-borne diseases	Prof. JSM Peiris	Lecture/ Discussion	TBC
29 Feb 2024	6:30 – 9:00 pm	6. Hendra and Nipah viruses, emerging threats?	Prof. LLM Poon	Lecture/ Discussion	TBC
07 Mar 2024	6:30 – 9:00 pm	7. Food Safety and One Health	Dr. H-L Yen	Lecture/ Discussion	TBC
14 Mar 2024	6:30 – 9:00 pm	8. Ebola and other viral hemorrhagic fevers	Prof. JSM Peiris	Lecture/ Discussion	TBC
21 Mar 2024	6:30 – 9:00 pm	9. A case study of an emerging infectious disease outbreak (Part 1)	Prof. JSM Peiris/ Dr. H-L Yen	Discussion	TBC
28 Mar	6:30 – 9:00 pm	10. A case study of an emerging infectious	Prof. JSM Peiris/ Dr.	Discussion	TBC



2024		disease outbreak (Part 2)	H-L Yen		
11 Apr 2024	6:30 – 9:00 pm	11. Disease eradication	Dr. H-L Yen	Lecture/ Discussion	TBC
18 Apr 2024	6:30 – 8:30 pm	12. Interspecies transmission: crossing the species barrier	Dr. H-L Yen	Lecture	TBC
11 May 2024	2:00 – 4:00 pm	13. Class test	-	-	TBC

Course Assessment: Continous in course assessment (100%), including in course discussions 35% (15% from pre-discussion MCQ and 20% from discussions) , case study Part I (10%), case study Part 2 (10%), and class test (45%).

- Recommended readings:**
1. LA Beltz, (2011) Emerging Infectious Diseases. John Wiley & Sons Ltd.
 2. DM Morens and AS Fauci, (2020) Emerging Pandemic Diseases: How We Got to COVID-19. Cell 182:1077-1092.
 3. Keusch GT, Amuasi JH, Anderson DE, Daszak P, Eckerle I, Field H, Koopmans M, Lam SK, Das Neves CG, Peiris M, Perlman S, Wacharapluesadee S, Yadana S, Saif L. Pandemic origins and a One Health approach to preparedness and prevention: Solutions based on SARS-CoV-2 and other RNA viruses. Proc Natl Acad Sci U S A. 2022 Oct 18;119(42):e2202871119.
 4. Bernstein AS, Ando AW, Loch-Temzelides T, Vale MM, Li BV, Li H, Busch J, Chapman CA, Kinnaird M, Nowak K, Castro MC, Zambrana-Torrel C, Ahumada JA, Xiao L, Roehrdanz P, Kaufman L, Hannah L, Daszak P, Pimm SL, Dobson AP. The costs and benefits of primary prevention of zoonotic pandemics. Sci Adv. 2022 Feb 4;8(5):eabl4183.
 5. Lefrançois T, Malvy D, Atlani-Duault L, Benamouzig D, Druais PL, Yazdanpanah Y, Delfraissy JF, Lina B. After 2 years of the COVID-19 pandemic, translating One Health into action is urgent. Lancet. 2022 Oct 21:S0140-6736(22)01840-2.
 6. Berthe, Franck Cesar Jean; Bali, Sulzhan Rameshwari; Batmanian, Garo J. *Putting Pandemics Behind Us : Investing in One Health to Reduce Risks of Emerging Infectious Diseases (English)*. Washington, D.C. : World Bank Group.
<http://documents.worldbank.org/curated/en/099530010212241754/P17840200ca7ff098091b7014001a08952e>

Contact person: TBC