Course Title/Code: **Infectious Disease Epidemiology (MMPH6167)**

Department: School of Public Health

Objective:

1. To introduce the basic concepts of infectious disease epidemiology
2. To describe the interplay among pathogens, hosts and environment in infectious disease epidemiology
3. To explain methods for assessing the transmissibility and severity of infectious diseases
4. To compare modern surveillance control measures for infectious diseases
5. To analyze and interpret infectious disease data

Content:

Course topics include:

- Introduction
- Natural history and severity
- Transmissibility
- Immunity and vaccination
- Surveillance
- Study design
- Models
- Seroepidemiology
- Molecular epidemiology
- Sexually transmitted diseases

Learning outcomes:

By the end of the course, students should be able to:

1. Describe the basic principles and frameworks of infectious disease epidemiology.
2. Characterize the natural history and transmission of infectious diseases in terms of incubation period, latent period, serial interval, generation time, reproductive number, and other key terms used in infectious disease modeling.
3. Define severity of an infectious disease and identify difficulties associated with severity estimation.
4. Explain herd immunity and the population-level effect of vaccination.
5. Describe different forms of public health surveillance for infectious diseases.
6. Describe the basic principles of infectious disease modeling.

Duration: 3 hours/week; 30 contact hours

Continuous assessment Examination ratio: Coursework 70%; Examination 30%

Examination method/ duration: Written examination / 2 hours

Remarks: Also offered to RPg from other Faculties at HKU. Approval from the School must be sought prior to enrollment.