

中國醫藥大學一百學年度第二學期教學進度表

科目：流行病學建模與分析（二）

學分數：2學分

負責教師：謝英恒

修別：選修

系別班別：公共衛生學系碩士班1年A班

上課時間：週四[34節]

上課教室：教學大樓15樓1504室

一、教學目標：

This course is designed for graduate students in public health or in applied mathematics and statistics who wish to understand mathematical modeling and analysis relating to their respective research or to develop models for their own work. There will also be a tutorial session on simple mathematical modeling softwares.

二、課程內容：

日期	課程內容	授課教師
2012/02/23	Course Introduction/ Modeling HIV Underreporting (lecture 11)	謝英恒
2012/03/01	Course Introduction/ Modeling HIV Underreporting (lecture 11)	謝英恒
2012/03/08	Project progress discussions	謝英恒
2012/03/15	Pair-formation models for STD: Introduction (lecture 12)	謝英恒
2012/03/22	Project proposal	謝英恒
2012/03/29	Pair-formation models: HIV as an example, Part I (lecture 13)	謝英恒
2012/04/05	放假	謝英恒
2012/04/12	Pair-formation models: HIV as an example, Part II (lecture 14)	謝英恒
2012/04/19	Mid-term Project progress report	謝英恒
2012/04/26	Mid-term Project progress report	謝英恒
2012/05/03	Public health-related modeling: Estimation of infected population size in hidden populations (lecture 15)	謝英恒
2012/05/10	Public health-related modeling: Estimation of infected population size in hidden populations (lecture 15)	謝英恒
2012/05/17	Public health-related modeling: Herd immunity and vaccination strategy (lecture 16)	謝英恒
2012/05/24	More Compartment Models: Spatial Spread and Patch Model (lecture 17)	謝英恒
2012/05/31	More Compartment Models: Spatial Spread and Patch Model (lecture 17)	謝英恒
2012/06/07	Project progress discussions	謝英恒
2012/06/14	Modeling Candidate Genes Associated with Susceptibility to SARS-CoV (lecture 18)	謝英恒
2012/06/21	Final project presentation	謝英恒

三、授課方式:

Class sessions will primarily consist of lectures.

四、評分標準:

Project proposal/mid-term progress report: 40%; Course project presentation: 20%; Final project report: 40%.

五、參考書目

1. Anderson, R., and May, R. (1991) *Infectious Diseases of Humans: Dynamics and Control*. Oxford University Press, Oxford.
2. Brauer, F., van den Driessche, P., and Wu, J. (2008) *Mathematical Epidemiology*. Springer-Verlag, Berlin.