

Accommodation and Meals

A list of hotels and other accommodation located in the vicinity of the School can be supplied on request to the Registry. Lunch can be purchased from the School's refectory. Evening meals are not catered for, but there is a large choice of restaurants, cafés and shops nearby.

Student Testimonials

"I would say it is a must for infectious disease epidemiologists."

"Really helps reinforce basic epidemiology and how that is applied and taken further."

"It gives a good picture of the problem. It is not too technical and therefore people with different backgrounds can follow and understand."

"Great course! It's hard to bring people from different levels of knowledge together, but this course succeeded in doing so."

"Lots of practicals for each session, lots of examples based on diseases: wide spectrum for applications."

"Excellent teachers, very good division of time between activities."

"Everything was very well organised."

"All materials were and will be extremely useful. Organisation was perfect. I really enjoyed this course very much, the best I ever followed."



London School of Hygiene & Tropical Medicine

The London School of Hygiene & Tropical Medicine is an internationally renowned centre for research and postgraduate education in public and global health, with 4,000 students and more than 1,000 staff working in over 100 countries. The School is highly ranked in a number of university league tables, including being named top in Europe for impact (Leiden Ranking, 2016) and the world's leading research focused graduate School (Thomson Reuters / Times Higher Education).

Our mission is to improve health and health equity in the UK and worldwide; working in partnership to achieve excellence in public and global health research, education and translation of knowledge into policy and practice.

How to Apply

Applicants should complete the online application form available on the course webpage:
www.lshtm.ac.uk/study/cpd/siidma.html

Registry

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Course Organisers

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LONDON
SCHOOL of
HYGIENE
& TROPICAL
MEDICINE



Introduction to Infectious Disease Modelling & Its Applications

Short Course: 19 - 30 June 2017

Improving health worldwide

Further Information: www.lshtm.ac.uk/study/cpd/siidma.html

The Course

Mathematical modelling is increasingly being applied to interpret and predict the dynamics and control of infectious diseases. Applications include determining optimal control strategies against emergent or new infections, such as Zika, Ebola and swine flu or against HIV, tuberculosis and vector-borne diseases, and predicting the impact of vaccination strategies against common infections such as measles and rubella.

This two-week intensive course is intended to introduce professionals working on infectious diseases in either developing or developed countries to this exciting and expanding area. The emphasis will be on developing a conceptual understanding of the basic methods and on their practical application, rather than the manipulation of mathematical equations. The methods will be illustrated by "hands-on" experience of setting up models in spreadsheets (as well as other specialist modelling packages), small group work, and seminars in which the applications of modelling will be discussed.

By the end of the course, participants will have enhanced their understanding of infectious disease epidemiology and will have gained practical experience of the basics of infectious disease modelling, which will be useful in their future work. The material from this popular and successful course is complemented by the recently published book "An Introduction to Infectious Disease Modelling", which was written by the two of the course organisers (Emilia Vynnycky and Richard White - further details available at: www.anintroductiontoinfectiousdiseasemodelling.com)

Course Content

The course makes use of Excel, and a specialist modelling package (Berkeley Madonna). The topics to be covered include:

- key concepts in infectious disease epidemiology
- the basic methods for setting up deterministic and stochastic infectious disease models
- practical applications of modelling, including predicting the impact of control strategies against pandemic influenza and childhood infections, and describing the course of outbreaks
- interpreting outbreak data and modelling in real-time

Course Tutors

The course is organised jointly by the London School of Hygiene & Tropical Medicine and Public Health England. It is taught by staff from the Centre for Mathematical Modelling of Infectious Diseases at the School, the Modelling and Economics unit at Public Health England, and the University of Sao Paulo, Brazil. Staff have extensive experience in working closely with epidemiologists and non-modellers, in applying modelling to practical problems and field data from developed and developing countries as well as in teaching modelling techniques to professionals in medical and biological disciplines. Further details about the backgrounds of staff in the Centre for Mathematical Modelling of Infectious Diseases can be found at: cmmid.lshtm.ac.uk

Who Should Attend?

The course is designed for individuals interested in expanding their knowledge of the techniques available for analysing and interpreting epidemiological data on infectious diseases and for predicting the impact of control programmes. This may include medical and health professionals, policy makers, veterinary scientists, medical statisticians, health economists and infectious disease researchers. Specialist mathematical training is not a prerequisite.

Individuals with degrees in mathematical disciplines working on some aspect of infectious disease dynamics and/or control, who wish to learn about the potential of infectious disease modelling will also benefit. Some familiarity with spreadsheet packages (ideally Excel) is desirable. Applicants should have a good command of English.

Teaching Methods

All teaching is carried out at the School or nearby, and consists of lectures, computer practicals and small group discussions. Participants also engage in a problem-based learning exercise on pandemic influenza or Ebola spread over several days, specially designed to show how modelling can help to solve "real" problems and provide practice in designing models and using models to decide policy.

Optional lunch-time or evening seminars by eminent modellers and epidemiologists illustrating the practical applications of modelling are scheduled throughout the course. Speakers in the past have included Neil Ferguson (Imperial College), Hans Heesterbeek (University of Utrecht), Roy Anderson (Imperial College, London), Brian Williams (World Health Organization), Liz Miller (Public Health England), Raymond Hutubessy (World Health Organization).

Tutors are available for discussion throughout the course. A short "clinic" is also scheduled, during which participants have the opportunity to discuss questions relating to their own work in more depth.

Finally, there are several opportunities for social and intellectual interaction during the course, including a reception, a guided walk around the sites of special medical interest in London, a quiz, theatre outing and a meal and a trip on the London Eye.

Course Materials

A course manual containing detailed lecture notes, practicals, papers and solutions, a USB containing the models used during the course, and a licence for the specialist modelling package "Berkeley Madonna", will be given to participants, as well as a copy of the book "An Introduction to Infectious Disease Modelling" by the course organisers. There will be no formal assessment but at the conclusion of the course, a certificate of attendance will be provided.

Course Fee

The fee for the course is £2,375. This fee covers participation in the course and the course materials (including a licence for Berkeley Madonna). It does not include travel costs, accommodation or meals. If the course fee is to be paid on the candidate's behalf, please send a letter from the sponsors to confirm this as soon as possible. Otherwise, the applicant will be held responsible for payment.

The fee is payable by **15 May 2017** and attendance on the course may not begin until the fee is paid in full. Cancellation of attendance on a course after the fee deadline may lead to a loss of all or part of the fee.

- analyses of seroprevalence data: methods for estimating age and time-dependent transmission rates and their application for developing models of the dynamics of infections
- how to read and interpret modelling papers
- fitting models to data, sensitivity analyses, health economics, network modelling
- models for describing STI and HIV transmission and control
- models of the dynamics and control of vector-borne diseases, tuberculosis, phylodynamics and the application of models to problems in veterinary epidemiology