

Module Specification

LONDON
SCHOOL of
HYGIENE
& TROPICAL
MEDICINE



ABOUT THIS DOCUMENT

This module specification applies for the academic year 2019-20

Last revised 14 September 2018 by Francesco Checchi

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GENERAL INFORMATION

Module name	Epidemiology & Control of Communicable Diseases
Module code	2437
Module Organisers	Professor Francesco Checchi, Dr Adam Kucharski and Jillian Murray
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Home Faculty	Epidemiology & Population Health
Level	Level 7 (postgraduate Masters 'M' level) of the QAA Framework for Higher Education Qualifications in England, Wales & Northern Ireland (FHEQ)
Credit	15 credits
Accreditation	Not currently accredited by any other body
Keywords	Epidemiology, infection, infectious disease, communicable disease, outbreak, surveillance, vaccination, dynamics of infection, model

AIMS, OBJECTIVES AND AUDIENCE

Overall aim	To provide foundational knowledge on the epidemiology of infectious diseases: basic concepts and methods; epidemiological aspects of vaccination; surveillance and outbreak investigation; and detailed discussion of the epidemiology of important representative infectious diseases.
Intended learning outcomes	By the end of this module, students should be able to: <ul style="list-style-type: none">• Demonstrate understanding of key concepts, terms and quantities used to describe the frequency, distribution and transmissibility of infectious diseases• State and explain the principles underlying simple transmission dynamic models of infectious diseases• Design, carry out, analyse, interpret and report an outbreak investigation• Interpret and evaluate surveillance data on infectious diseases• Demonstrate understanding of how vaccines protect susceptible people and evaluate the appropriateness and effectiveness of different vaccination strategies

	<ul style="list-style-type: none"> Adapt and supplement foundational concepts to study the epidemiology of particular high-burden infectious diseases
Target audience	This module is intended for students interested in the epidemiology and control of infectious diseases in either developing or developed countries.
CONTENT	
Session content	<p>The module is expected to include sessions addressing the following topics:</p> <ul style="list-style-type: none"> Methods and concepts: incubation periods, epidemic patterns, modes of transmission, transmission dynamics, measures of infectiousness, secondary attack rates, mathematical models of infection dynamics and sero-epidemiology Outbreak investigation and surveillance: includes a simulated outbreak which students investigate, analyse and write-up Vaccination: includes technical and clinical/immunological aspects, schedules, adverse reactions, vaccine efficacy, impact assessment Specific diseases: will include some or all of TB, malaria, HIV and infectious diseases in humanitarian crises <p>An optional three-hour training on the EpiData software package for epidemiological study data management is also offered during the reading week immediately prior to the course.</p>
TEACHING, LEARNING AND ASSESSMENT	
Study resources provided or required	Module Information can be found on the Virtual Learning Environment (Moodle) containing information about each session and key references for the module. A calculator is required. Lecture and practical materials and notes will be provided on Moodle, nearly always ahead of the session.
Teaching and learning methods	A variety of teaching methods will be used, including traditional didactic lectures, problem solving practicals, group work (outbreak investigation), demonstration, and debate.
Assessment details	<p>Assessment will be based upon a group-written outbreak investigation report (20%) and a multiple choice question examination (80%).</p> <p>Resit/deferred/new attempts - There will be a written, open-book exam.</p>
Assessment dates	<p>The multiple choice question examination will take place on the last day of module; the outbreak investigation report will be due at the end of Week 3 of the module.</p> <p>Resit/deferred/new attempts - mid/late September of the current academic year, about 2-3 weeks after the MSc project deadline.</p>
Language of study and assessment	English (please see 'English language requirements' below regarding the standard required for entry).
TIMING AND MODE OF STUDY	
Duration	5 weeks at 2.5 days per week
Dates	Wednesday lunchtime to Friday afternoon
Timetable slot	Term 2 - slot D2

Mode of Study	The module is taught face-to-face in London. Both full-time and part-time students follow the same schedule.
Learning time	The notional learning time for the module totals 150 hours, consisting of: <ul style="list-style-type: none"> • Contact time ≈ 63 hours • Directed self-study ≈ 40 hours • Assessment, review and revision ≈ 47 hours
APPLICATION AND ADMISSION	
Pre-requisites	To benefit from the module students will need to have an understanding of basic epidemiological and statistical methods as covered in Term 1. Familiarity with the Epi-Data software package is non-essential but encouraged: students who are not familiar with this package are likewise encouraged to sign up for one of the Epi-Data training sessions offered specifically for prospective ECCD students during the reading week immediately before the module starts.
English language requirements	A strong command of the English language is necessary to benefit from studying the module. Applicants whose first language is not English or whose prior university studies have not been conducted wholly in English must fulfil LSHTM's English language requirements .
Student numbers	200 (numbers may be capped due to limitations in facilities or staffing)
Student selection	Preference will be given to LSHTM MSc students, particularly those registered for specific programmes or who have taken specific prior modules, where applicable and LSHTM research degree students. Other applicants meeting the entry criteria will usually be offered a place in the order applications are received, until any cap on numbers is reached. Applicants may be placed on a waiting list and given priority the next time the module is run. Full Registration (full participation) by LSHTM research degree students is required for this module.