Module Specification

LONDON SCHOOL of HYGIENE &TROPICAL MEDICINE

ABOUT THIS DOCUMENT

This module specification applies for the academic year 2019-20

Last revised 28 August 2018 by Vicky Simms

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GENERAL INFORMATION

Module name	**Design & Analysis of Epidemiological Studies**
Module code	2417
Module Organisers	Dr Christian Bottomley and Baptiste Leurent
Contact email	Christian.Bottomley@lshtm.ac.uk or Baptiste.Leurent@lshtm.ac.uk
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	Statistics, Epidemiology, Research.

AIMS, OBJECTIVES AND AUDIENCE

Overall aim	To equip students with the necessary skills to understand and appraise the design, analysis and interpretation of epidemiological studies
Intended learning outcomes	By the end of this module, students should: - Be familiar with the main study designs used in epidemiological research, and understand their advantages and disadvantages. - Understand the concepts of confounding, statistical interaction and clustering. - Understand why statistical models are used in epidemiology - Be able to interpret the output from a logistic regression model - Be able to critically appraise the design, analysis and interpretation of studies conducted by other investigators, and communicate effectively with public health researchers
Target audience	The module is intended for students who have attended Term 1 modules in Epidemiology and in Statistics, and who wish to understand more about the design and analysis of epidemiological studies. It includes some review and consolidation of Term 1 material.

CONTENT	
Session content	The module is expected to include sessions addressing the following topics: • Design issues in epidemiological studies. The advantages and disadvantages of different study designs will be explored through a case study • Multivariate analysis. Students will be introduced to the logistic regression model as a tool for controlling for confounding • Paper critique. Students will appraise a paper from the published epidemiological literature • Lectures will also cover: sample size, selection bias, confounding and statistical interaction
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. Students will be provided with exercises to be completed in the practical session.
Teaching and learning methods	Teaching will consist of lectures, computer practical sessions (using Stata), a problem-based exercise on study design, and paper review discussion sessions. Data from both developing and developed countries will be used to illustrate the methods covered. Approximately ten sessions will be timetabled for private study time.
Assessment details	Students will answer a series of questions critiquing the design, analysis and interpretation of one study reported in the public health literature. Students' grades will be determined by their performance on this assignment. Resit/deferred/new attempts - The task will be based on a different paper.
Assessment dates	The assessment will be due on **Friday 15 February 2019**. Resit/deferred/new attempts - the next assessment deadline will be during mid/late September of the current academic year.
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 **C2**
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: • Contact time ≈ 37 hours • Directed self-study ≈ 9 hours • Self-directed learning ≈ 60 hours • Assessment, review and revision ≈ 44 hours

APPLICATION AND ADMISSION	3
Pre-requisites	An introductory statistics course.
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	76 (numbers may be capped due to limitations in facilities or staffing)
Student selection	Preference will be given to LSHTM MSc students 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. Partial Registration (partial participation) by LSHTM research degree students is allowed for this module.