

MODULE SPECIFICATION

1. Overview

Academic Year (student cohort covered by specification)	2019-20			
Module Code	2007			
Module Title	Extended Epidemiology			
Module Organiser(s)	Prof Krishnan Bhaskaran, Dr Kathryn Mansfield and Dr Melissa Matz			
Faculty	Epidemiology and Population Health			
FHEQ Level	Level 7			
Credit Value	CATS	15 credits, within the larger 60-credit Term 1 super-module for each MSc programme. Credits are not awarded for this module individually, but only for successful completion of the Term 1 super-module.	ECTS	ECTS credit value is half of the CATS credit value.
HESA Cost Centre	101 Clinical medicine			
HECoS Code	101335 Epidemiology			
Term of Delivery	Term 1			
Mode of Delivery	Face to face			
Mode of Study	Both full-time and part-time students follow the same schedule.			
Language of Study	English 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.			
Pre-Requisites	None, but quantitative skills expected.			
Accreditation by Professional Statutory and Regulatory Body	Not currently accredited by any other body.			
Module Cap (Maximum number of students)	250 (numbers may be capped due to limitations in facilities or staffing)			

Target Audience	Extended Epidemiology is a core module for all students on the MSc Epidemiology, MSc Veterinary Epidemiology and MSc Public Health for Development programmes. Students of MSc Control of Infectious Diseases, MSc Demography and Health, and MSc Reproductive and Sexual Health Research must take either Basic Epidemiology or Extended Epidemiology.
Module Description	The module aims to introduce the basic concepts in the design, analysis and interpretation of epidemiological studies and provide an introduction to epidemiological methods applied to public health.
Duration	10 weeks at 1 day per week (Tuesday and Wednesday mornings)
Timetabling slot	Term 1
Last Revised (e.g. year changes approved)	June/2019

2. Programme(s) that this module is part of

Programme (Lead programme first)	Status (Compulsory/Recommended Option)
MSc Epidemiology	compulsory
MSc Veterinary Epidemiology	compulsory
MSc Public Health for Development	compulsory
MSc Control of Infectious Diseases	option
MSc Demography and Health	option
MSc Reproductive & Sexual Health Research	option

3. Module Aim and Intended Learning Outcomes

Overall aim of the module
The overall module aim is to introduce the basic concepts in the design, analysis and interpretation of epidemiological studies and provide an introduction to epidemiological methods applied to public health.

Module Intended Learning Outcomes
Upon successful completion of the module a student will be able to:
1. Describe, calculate and interpret epidemiological measures.
2. Identify the key principles and assess the relative merits of different epidemiological study designs.
3. Discuss and evaluate key considerations in the design, conduct and interpretation of epidemiological studies.
4. Identify the major potential sources of error in epidemiological studies and assess the implications of these sources of error.
5. Apply epidemiological principles to the ascertainment of disease in populations.

4. Indicative Syllabus

Session Content
<p>The module is expected to cover the following topics:</p> <ul style="list-style-type: none"> • Cases & measures of disease frequency • Measures of effect • Measures of population impact • Infectiousness and dynamics of infection • Ecological studies • Intervention studies • Cohort studies • Case-control studies • Bias • Measurement error: validity and reliability • Confounding and effect modification • Control of confounding • Screening • Causality • Routine statistics and surveillance

5. Teaching and Learning

Notional Learning Hours		
Type of Learning Time	Number of Hours	Expressed as Percentage (%)
Contact time	≈ 52 hours	35%
Directed self-study	≈ 38 hours	25%
Self-directed learning	≈ 10 hours	7%
Assessment, review and revision	≈ 50 hours	33%
Total	150	100%

Teaching and Learning Strategy
<p>The teaching and learning strategy centres around lectures followed by practical sessions. In the practical sessions students have the opportunity to apply the concepts and methods covered in the immediately preceding lectures. The practicals provide students with “hands on” experience in thinking and working through concepts and learning points in the context of real examples. Practical tutors facilitate small-group discussions and sum up key points in class discussions. For each practical students are provided with detailed solutions to the tasks set, enabling to them to check that their understanding of the material. An extended practical “design” exercise at the end of term brings together learning points from several sessions. There are review lectures at the middle and end of term, where material is recapped and students can ask questions and clarify points; there are also formative mid-term and end-of-term tests.</p>



Indicative Breakdown of Contact Time

Type of delivery	Total (hours)
Lecture	≈ 22
Seminar	≈ 30
Tutorial	0
Computer Practical	0
Laboratory Practical	0
Fieldwork	0
Project Supervision	0
Total	52

6. Assessment

Assessment Strategy

There are two informal assessments of progress during the course of the module, neither of which count towards the final degree: a mid-term test (during reading week), to be carried out in the student's own time, and a second test at the end of term.

Formal assessment is by written examination, and will take place during the summer term in June.

Resit / deferral / new attempts will take place during the summer term in June in the following academic year.

Summative assessment

Assessment Type	Assessment Length (i.e. Word Count, Length of presentation in minutes)	Weighting (%)	Intended Module Learning Outcomes Tested
Exam (Paper 1)	Not applicable	100	All

Resitting assessment

Resits will accord with the LSHTM's [Resit policy](#).

7. Resources

Indicative reading list (if applicable)

1. Webb P, Bain C. Essential epidemiology : an introduction for students and health professionals /. 2nd ed. Cambridge, UK: Cambridge University Press; 2011.
2. Hennekens CH, Buring JE, Mayrent SL. Epidemiology in medicine /. Boston: Little Brown; 1987.
3. Gordis L. Epidemiology /. Fifth edition. Philadelphia, PA: Elsevier/Saunders; 2013.
4. Bailey L, Vardulaki K, Langham J, Chandramohan D. Introduction to epidemiology / [Internet]. 2005.
5. Carneiro I, Howard N. Introduction to epidemiology / [Internet]. Second edition. Maidenhead: McGraw Hill Oxford University Press; 2011.
6. Keyes KM, Galea S. Epidemiology matters : a new introduction to methodological foundations /. Oxford: Oxford University Press,; 2014.
7. Silva I dos S. Cancer epidemiology : principles and methods / [Internet]. Lyon, France: International Agency for Research on Cancer; 1999. Available from: <http://publications.iarc.fr/Non-Series-Publications/Other-Non-Series-Publications/Cancer-Epidemiology-Principles-And-Methods-1999>
8. Bonita R, Beaglehole R, Kjellström T. Basic epidemiology / [Internet]. Second edition. Geneva: World Health Organization; 2006.
9. Porta MS. A dictionary of epidemiology /. Sixth edition. Oxford: Oxford University Press,; 2014.
10. Rothman KJ, Greenland S, Lash TL. Modern epidemiology /. Third edition. Philadelphia, PA: Lippincott-Raven; 2008.
11. Giesecke J. Modern infectious disease epidemiology /. Second edition. London: Taylor and Francis; 2001.
12. Coggon D, Rose G, Barker DJP. Epidemiology for the uninitiated / [Internet]. Fifth edition. London: BMJ; 2003.

Other resources

Module information can be found on the Virtual Learning Environment (Moodle), including information about each session and key references for the module. Lecturers make their PowerPoint slides available electronically. We provide practical solutions at the end of practical sessions. A selection of textbooks is suggested, but not required. All are available in the Library.

8. Teaching for Disabilities and Learning Differences

All lectures are recorded and made available online. Notes, slides and handouts are provided prior to each session, and solutions afterwards. Individual requests for additional supportive measures will be accommodated wherever possible.