



## MODULE SPECIFICATION

<b>Academic Year (student cohort covered by specification)</b>	2020-21
<b>Module Code</b>	2056
<b>Module Title</b>	Epidemiology in Practice
<b>Module Organiser(s)</b>	Overall: Professor Betty Kirkwood, Sara Benitez Majano, Sunil Bhopal Data management component: Estelle McLean
<b>Faculty</b>	Epidemiology & Population Health
<b>FHEQ Level</b>	Level 7
<b>Credit Value</b>	<b>CATS:</b> 15 <b>ECTS:</b> 7.5
<b>HECoS Code</b>	101335 : 100962 : 101317
<b>Term of Delivery</b>	Term 1
<b>Mode of Delivery</b>	For 2020-21 this module will be delivered online only.  Where specific teaching methods (lectures, seminars, discussion groups) are noted in this module specification these will be delivered using an online platform. There will be a combination of live and interactive activities (synchronous learning) as well as recorded or self-directed study (asynchronous learning).
<b>Mode of Study</b>	Full-time
<b>Language of Study</b>	English
<b>Pre-Requisites</b>	None
<b>Accreditation by Professional Statutory and Regulatory Body</b>	None
<b>Module Cap (Maximum number of students)</b>	60-70 (numbers may be capped due to limitations in facilities or staffing)
<b>Target Audience</b>	This module is compulsory for the MSc in Epidemiology and the MSc in Veterinary Epidemiology, and an optional module for PhD students. It is also available as a stand-alone short course.
<b>Module Description</b>	This module will provide students with essential practical skills required when working as an epidemiologist, and to encourage students to think about the ways in which

	epidemiological research links into wider public health and policy issues.
<b>Duration</b>	10 weeks: Average 4.5 hours contact time/week; Average 6 hours directed self-study/week (including reading week)
<b>Timetabling slot</b>	Term 1
<b>Last Revised (e.g. year changes approved)</b>	August/2020

<b>Programme(s)</b>	<b>Status</b>
This module is linked to the following programme(s)	
MSc Epidemiology	Compulsory
MSc Veterinary Epidemiology	Compulsory

## Module Aim and Intended Learning Outcomes

<b>Overall aim of the module</b>
<p>The overall module aim is to:</p> <ul style="list-style-type: none"> <li>• Provide students with essential practical skills required when working as an epidemiologist, and to encourage students to think about the ways in which epidemiological research links into wider public health and policy issues.</li> </ul>

<b>Module Intended Learning Outcomes</b>
<p>Upon successful completion of the module a student will be able to:</p> <ol style="list-style-type: none"> <li>1. Assess when epidemiological evidence is sufficient to justify a public health policy or intervention</li> <li>2. Formulate the problems of dealing with uncertainty when making public health policy, when epidemiological evidence does not or cannot give a clear answer</li> <li>3. Unpack a public health issue, evaluate relevant evidence, examine logistic and ethical issues, and formulate recommendations</li> <li>4. Evaluate the barriers to acting upon epidemiological evidence (vested interests, costs, practicalities) and to collecting epidemiological data (resource constraints, political issues)</li> <li>5. Demonstrate the importance of effective communication of research findings including with the media, and also how epidemiological evidence can be misrepresented or misused</li> <li>6. Formulate ethical issues and appreciate their importance in the conduct of epidemiologic research and in making public health policy</li> <li>7. Apply practical skills in fieldwork conduct and design</li> </ol>

### Module Intended Learning Outcomes

8. Apply practical skills in questionnaire design, database design (using ODK), and preparing data for analysis (using STATA), and appreciate the importance of a comprehensive strategy for collecting and managing epidemiological data
9. Critically assess an epidemiological study, and systematic reviews of epidemiological evidence.

### Indicative Syllabus

#### Session Content

The module is expected to cover the following topics:

- Communicating and appraising research evidence for a range of major public health issues
- Key skills in communicating findings in research papers and with the media
- Unpacking public health issues
- Critical appraisal
- Key skills in fieldwork conduct and design
- Systematic reviews
- Principles of questionnaire design and data management
- Entering and preparing data for statistical analysis using Open Data Kit (ODK) and Stata

### Teaching and Learning

#### Notional Learning Hours

Type of Learning Time	Number of Hours	Expressed as Percentage (%)
Contact time	45	30
Directed self-study	67	45
Self-directed learning	20	13
Assessment, review and revision	18	12
<b>Total</b>	<b>150</b>	<b>100</b>

Student contact time refers to the tutor-mediated time allocated to teaching, provision of guidance and feedback to students. This time includes activities that take place in face-to-face contexts such as lectures, seminars, demonstrations, tutorials, supervised laboratory workshops, practical classes, project supervision as well as where tutors are available for one-to-one discussions and interaction by email. Student contact time also includes tutor-mediated activities that take place in online environments, which may be synchronous (using real-time digital tools such as Zoom or Blackboard Collaborate Ultra) or asynchronous (using



digital tools such as tutor-moderated discussion forums or blogs often delivered through the School's virtual learning environment, Moodle).

The division of notional learning hours listed above is indicative and is designed to inform students as to the relative split between interactive and self-directed study.

### Teaching and Learning Strategy

This 10-week module consists of an average 4.5 hours contact time/week and an average of 6 hours directed self-study/week. It employs a problem-based learning strategy and mixed methods: lectures, staff demonstration, group work sessions followed by group presentations with discussion or groupwork aimed at questions for panel discussions. Class is divided into Eastern (EH) & Western Hemisphere (WH) cohorts to cater for geographic spread and different time zones.

## Assessment

### Assessment Strategy

The assessment for this module has been designed to measure student learning against the module intended learning outcomes (ILOs) as listed above. Formative assessment methods are used to measure students' progress. The grade for summative assessment(s) only will go towards the overall award GPA.

The assessment for this module will be part of the summer exams which will be online.

Formative assessment:

Online ethics course (if available) with certificate; Reading week  
Critical Review of Paper; Winter Break

Summative assessment:

Paper 2; June Exam

### Summative Assessment

Assessment Type	Assessment Length (i.e. Word Count, Length of presentation in minutes)	Weighting (%)	Intended Module Learning Outcomes Tested
Exam (Papers 1 & 2)	1 question on Paper 2	100	1 – 9

### Resitting assessment

Resits will accord with the LSHTM's [Resits Policy](#)



## Resources

### Indicative reading list

1. Michie S van S. The behaviour change wheel: A new method for characterising and designing behaviour change interventions. *Implementation Science*. 2011;6(1). doi:10.1186/1748-5908-6-42.
2. Robinson TP, Bu DP, Carrique - Mas J, et al. Antibiotic resistance is the quintessential One Health issue. *Transactions of The Royal Society of Tropical Medicine and Hygiene*. 2016;110(7):377-380. doi:10.1093/trstmh/trw048.
3. Smith PG, Morrow RH, Ross DA, eds. *Field Trials of Health Interventions: a Toolbox /*. 3rd edition. Oxford University Press; 2015 (available to download free online).
4. WHO Commission on Social Determinants of Health. 2008 (available to download free online).
5. Rose G. Sick individuals and sick populations. *International Journal of Epidemiology*. 1985;14(1):32-38. doi:10.1093/ije/14.1.32
6. WHO Handbook for Guideline Development 2<sup>nd</sup> edition. 2014 (available to download free online <https://apps.who.int/iris/handle/10665/145714>).
7. Vandenberghe JP, von Elm E, Altman DG et al. for the STROBE initiative. (2007) Strengthening the Reporting of Observational Studies in Epidemiology (STROBE): Explanation and elaboration. *PLoS Medicine*. 4(10):e297.
8. Moher D, Hopewell S, Schulz KF et al. for the CONSORT Group. (2010) CONSORT 2010 Explanation and Elaboration: updated guidelines for reporting parallel group randomised trial. *British Medical Journal*. 340: c869 or *J Clin Epi*; 63(8): e1-e37 .
9. Higgins JPT, Thomas J (senior editors). *Cochrane Handbook for Systematic Reviews of Interventions Version 6* [updated October 2019]. The Cochrane Collaboration, 2019. Available from <https://training.cochrane.org/handbook>.
10. PRISMA Reporting Guidelines. <http://www.prisma-statement.org>.

### Other resources

DL Modules EPM103; EPM105; Global Health Training Centre Research Ethics Online Training Course, if available. If not DL Module PE03. Students will be provided with access to the following resources via Moodle: session outlines (PDF), lecture slides/handouts (PDF), recorded lectures (video or PowerPoint), groupwork instructions (PDF + recorded), zoom recorded panel discussions and reading lists with all items available in accessible format and weblinks with PDFs of documents.



## Teaching for Disabilities and Learning Differences

The module-specific site on Moodle provides students with access to lecture notes and copies of the slides used during the lecture prior to the lecture (in pdf format). All lectures are recorded and made available on Moodle as quickly as possible. All materials posted up on Moodle areas, including computer-based sessions, have been made accessible where possible.

The LSHTM Moodle has been made accessible to the widest possible audience, using a VLE that allows for up to 300% zoom, permits navigation via keyboard and use of speech recognition software, and that allows listening through a screen reader. All students have access to "SensusAccess" software which allows conversion of files into alternative formats.

For students who require learning or assessment adjustments and support this can be arranged through the Student Support Services – details and how to request support can be found on the [LSHTM Disability Support pages](#).