



## MODULE SPECIFICATION

<b>Academic Year (student cohort covered by specification)</b>	2022-23
<b>Module Code</b>	2056
<b>Module Title</b>	Epidemiology in Practice
<b>Module Organiser(s)</b>	Professor Betty Kirkwood, Dr Alexander Manu, Dr Robert Hughes
<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 2022-23 this module will be delivered by predominantly face-to-face teaching modes.  Where specific teaching methods (lectures, seminars, discussion groups) are noted in this module specification these will be delivered by predominantly face-to-face sessions. 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 (indicative number of students)</b>	Indicative number 60-90; numbers above this 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, an understanding of the ways in which epidemiological research

	links into wider public health and policy issues, and an ability to effectively engage in discussions concerning this.	
<b>Duration</b>	10 weeks: 20 half-day sessions (Monday & Wednesday afternoons)	
<b>Timetabling slot</b>	Term 1	
<b>Last Revised (e.g. year changes approved)</b>	August/2022	
<b>Programme(s)</b> This module is linked to the following programme(s)	<b>Status</b>	
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, an understanding of the ways in which epidemiological research links into wider public health and policy issues, and an ability to effectively engage in discussions concerning this.</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. Unpack public health issues &amp; interventions in diverse contexts in order to formulate appropriate recommendations/strategies, including dealing with uncertainty.</li> <li>2. Critically appraise the facilitators and barriers in diverse settings in order to maximise the likelihood of getting research findings into practice</li> <li>3. Design epidemiological data collection and critically appraise systematic reviews in order to address gaps in research evidence.</li> <li>4. Identify ethical issues in the conduct of epidemiologic research and in making public health policy and understand how key ethical principles can be applied in order to respect the rights and ensure the safety of research participants/populations.</li> </ol>



## Indicative Syllabus

### Session Content

The module adopts a problem-based approach to achieve its ILOs. It is expected to cover the following topics:

- Unpacking public health issues (including animal health and welfare issues): This is a key essential skill underlying much of epidemiology research and practice. Unpacking essentially means identifying all the questions that need to be answered in order to formulate recommendations/strategies/proposals and deciding what is known, what is not known, and how to gather relevant evidence. This will be addressed in introductory sessions:

- Staff panel demo of unpacking in real time
- Practical unpacking: Intervention Design

And applied in sessions throughout the course tackling a range of current issues and settings

- Barriers and facilitators to getting research into practice and to effective public health action explored through a range of topics such as:
  - Navigating stakeholder perspectives, interdisciplinary approaches and multi-sector partnerships, eg. Anti-microbial resistance, Brucellosis
  - Challenges in taking an effective intervention to scale, eg. Antenatal corticosteroids for premature labour
  - Panel sessions with a range of experts from across the globe discussing the interface between evidence and policy for a selection of current hot topics such as coronavirus and inequalities; “BBC Question Time” model
- Making guideline recommendations in the face of inconsistent evidence: pros and cons of different actions (including more research), ethical issues, complexity in decision making,
- Relevance of Geoffrey Rose’s classic “sick individuals and sick populations” theoretical paper to current thinking in a variety of fields such as vaccines, non-communicable diseases, adolescent health, child health & inequalities
- Communicating research findings through the media: benefits and challenges, principles of effective communication, effects of shifts in the media eco-system.
- Critical appraisal of epidemiologic papers
- Systematic reviews of evidence
- Key skills in planning fieldwork and designing data collection explored in the context of research studies and in programme monitoring and evaluation, such as a guinea worm eradication programme
- Research Ethics

## Teaching and Learning

### Notional Learning Hours

Type of Learning Time	Number of Hours	Expressed as Percentage (%)
Contact time	57	38
Directed self-study	36	24
Self-directed learning	27	18
Assessment, review and revision	30	20
<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.

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 two half day sessions/week and an average of 3-4 hours directed self-study/week. It employs a problem-based learning strategy and mixed methods: lectures, staff demonstration, panel discussions, group work sessions followed by group presentations with discussion or groupwork aimed at providing questions for panel discussions.

## 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. It will comprise two tasks:

1. Certificate showing successful completion of the LSHTM research ethics online course to be submitted by end November 2022 (ILO4). This course is timetabled in week 5 of Term 1. There are no limits to the number of attempts to pass the research ethics online course; a different set of 20 questions is tested in each attempt. A score of 80% or more is required to pass.
2. The module will also be assessed by a written assignment distributed during the last week of term. This will be related to one of the public health issues discussed with a



### Assessment Strategy

series of 5 or so linked questions covering ILOs1-3. The answers to be submitted by the end of the week before the start of term 2 teaching (ILOs1-3).

Last year's assignment will be shared at the beginning of term and students encouraged to attempt it during the term. They will be supported by a question and answer forum on Moodle and by discussing it with their tutors, who will have access to the marking guide.

### Summative Assessment

Assessment Type	Assessment Length (i.e. Word Count, Length of presentation in minutes)	Weighting (%)	Intended Module Learning Outcomes Tested
Quiz (with certificate) at the end of LSHTM's research ethics training course	20 multiple choice questions; 80% required to pass. There is no limit on the number of attempts.	10	4
Written assignment	Around two-three A4 pages with answers in bullet points, not full paragraphs.	90	1-3

### Resitting assessment

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

There will be an approved alternative written assignment, which will be given to students resitting the assignment at the end of term 2, for submission after the end of Term 3 before exam week.

Students who have failed the module overall, but passed the ethics assignment do not need to repeat this. Those students who failed overall and also failed the ethics assignment should repeat this and submit a certificate together with their new written assignment.



## 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. Vandembroucke 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; LSHTM Research Ethics training course. 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](#).