



MODULE SPECIFICATION

Academic Year (student cohort covered by specification)	2025-26
Module Code	3462
Module Title	Practical Research Skills
Module Organiser(s)	Dr Anna Last, Dr Philip Ayieko and Dr Christian Hansen
Faculty	Infectious & Tropical Diseases
FHEQ Level	Level 7
Credit Value	CATS: 15 ECTS: 7.5
HECoS Code	100265:100406 (1:1)
Term of Delivery	Term 2
Mode of Delivery	For 2025-26 this module will be delivered by a combination of online and face-to-face teaching modes. Where specific teaching methods (lectures, seminars, discussion groups) are noted in this module specification, these will be delivered using either an online platform or face to face sessions in LSHTM. There will be a combination of live and interactive activities (synchronous learning) as well as recorded or self-directed study (asynchronous learning).
Mode of Study	Full-time
Language of Study	English
Pre-Requisites	None
Accreditation by Professional Statutory and Regulatory Body	N/A
Module Cap (Indicative number of students)	30 (numbers may be capped due to limitations in facilities or staffing)
Target Audience	This module is intended specifically for students on the MSc Tropical Medicine and International Health but would be open to other students on discussion with the Module Organisers.
Module Description	This module provides an introduction to project administration, study design, fieldwork, statistical analysis using R, an introduction to the principles and practice of open data science, data management, and interpretation and presentation of research findings. The aim of the module is to

	equip the student with the skills required to design, conduct, analyse and report their field project, and for use in planning and conducting research generally. This module is applied and interactive and will be delivered by a combination of virtual and face-to-face sessions.
Duration	5 weeks at 2.5 days per week
Timetabling slot	Slot C1
Last Revised (e.g. year changes approved)	August 2024

Programme(s)	Status
This module is linked to the following programme(s)	
MSc Tropical Medicine & International Health	Recommended

Module Aim and Intended Learning Outcomes

Overall aim of the module
<p>The overall module aim is to:</p> <ul style="list-style-type: none"> • Provide students with the practical skills needed to plan, undertake and report a field project, focussing on applied research methods.

Module Intended Learning Outcomes
<p>Upon successful completion of the module a student will be able to:</p> <ol style="list-style-type: none"> 1. Search for and critically appraise relevant literature; 2. Formulate a study question and design a study to address the question; 3. Design a survey questionnaire and manage a database using Open Data Kit (ODK) or appropriate alternatives; 4. Undertake simple statistical analysis on study data using R; 5. Evaluate study results and present findings.

Indicative Syllabus

Session Content
<p>The module is expected to cover the following topics:</p> <ul style="list-style-type: none"> • Searching and appraising literature • Formulating a research question, aims, objectives, and the study design • Sample size determination • Sampling strategies and defining a study population

Session Content

- Study protocols, governance and regulatory approvals
- Ethical principles in research
- Principles of questionnaire design
- Introduction to qualitative research
- Organising field work; selecting and training field staff; quality management
- Introduction to Open Data Science, including the use of open online applications such as Open Data Kit (ODK)
- Principles of data entry, data management, and database design.
- Descriptive data analysis using R
- Common analyses of quantitative clinical research data using R
- Random measurement error; significance testing of differences in means and proportions
- Bias, confounding and causality; simple approaches to address confounding through study design and analysis
- Presentation of results; writing reports and papers

Teaching and Learning

Notional Learning Hours

Type of Learning Time	Number of Hours	Expressed as Percentage (%)
Contact time	50	33.33
Directed self-study	30	20
Self-directed learning	20	13.33
Assessment, review and revision	50	33.33
Total	150	100

Teaching and Learning Strategy

Content is generally delivered in the form of short lectures with interactive class-room discussion, followed by small-group and individual practical work. Much of the practical work will be centred on data management and R for analysis tasks, using a combination of independent group work and 'walk-through' tutorials. The module is very applied as the aim is to equip students with the skills needed to design, conduct, analyse and report their own field study.

Assessment

Assessment Strategy

The module is assessed by a group presentation, testing critical appraisal, study design and/or data interpretation skills, and a written assessment over 120 minutes which will consist of short-answer questions testing, for example, questionnaire design, data presentation and simple analysis skills. Group presentations will account for 40% (80% by an examiner and 20% from peer assessment) of the overall grade awarded for this module and the exam will account for 60%.

Resit/deferred/new attempts - The task will be to interpret and critically appraise the aims, methods and findings of a study report (in place of the group presentation), and a short answer written exam (in place of the written exam).

Summative Assessment

Assessment Type	Assessment Length (i.e. Word Count, Length of presentation in minutes)	Weighting (%)	Intended Module Learning Outcomes Tested
Written assessment	Short answer questions (120 minutes)	60%	2, 4, 5
Group Presentation	Examiner assessment of group presentation (15 slides). Final grade is weighted by peer assessment score of the group work exercise.	40%	1-4 (Full details of assessment criteria available on Moodle)

Resitting assessment

Resits will accord with [Chapter 8a](#) of the LSHTM Academic Manual

For individual students resitting a group assessment there will be an approved alternative assessment.



Resources

Indicative reading list

Links to relevant texts, articles and websites can be found below:

<https://eu02.alma.exlibrisgroup.com/leganto/readinglist/lists/1973714630003736>

Other resources

In addition to the reading list above, students on this module also have access to the CAL (computer-assisted learning) material that was developed for our distance learning course in Epidemiology. EPM101 (Fundamental of Epidemiology) and 102 (Statistics for Epidemiology) in particular are very relevant to the content of Practical Research Skills. Instructions for access to this material can be found in the online appendix via the link above.

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 (in pdf format). All lectures are recorded and made available on Moodle immediately after the session. 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](#).