MODULE SPECIFICATION

Academic Year (student cohort covered by specification)	2025-26
Module Code	2423
Module Title	Research Design & Analysis
Module Organiser(s)	Kathy Baisley and Emma Slaymaker
Faculty	Epidemiology & Population Health
FHEQ Level	Level 7
Credit Value	**CATS:** 15 **ECTS:** 7.5
HECoS Code	100962 : 101030
Term of Delivery	Term 2
Mode of Delivery	For 2025-26, this module will be delivered by predominantly face-to-face teaching modes for in-person students. There will be a combination of live and interactive activities (synchronous learning) as well as recorded or self-directed study (asynchronous learning). Some lectures will be pre-recorded; all practicals and group work sessions will be delivered face-to-face for London-based students. Some online-only students will be accepted from MSc Climate Change and Planetary Health and these will attend synchronous lectures, practical and groupwork classes online via Zoom.
Mode of Study	Full-time
Language of Study	English
Pre-Requisites	A working knowledge of Stata is required as well as basic statistics knowledge (e.g. equivalent to STEPH in EPH or Basic Statistics for PHP)
Accreditation by Professional Statutory and Regulatory Body	None
Module Cap (indicative number of students)	55 (numbers may be capped due to limitations in facilities or staffing)
Target Audience	This module is highly recommended for MSc Demography & Health and MSc Reproductive & Sexual Health Research students
Module Description	RDA provides an overview of the entire research process: identifying research questions, planning an appropriate study

	to collect suitable data to answer those questions, data analysis and interpretation and presentation of results. A large part of the module is an exercise in small groups using simulated data. Each group plans and designs a study and analyses a bespoke dataset to reach their own conclusions. This activity is supported by lectures and structured practicals on relevant topics.
Duration	5 weeks at 2.5 days per week
Timetabling slot	Slot C1
Last Revised (e.g. year changes approved)	August 20254

Programme(s) This module is linked to the following programme(s)	**Status**
MSc Reproductive & Sexual Health Research	Recommended
MSc Demography & Health	Recommended
MSc Public Health	Recommended
MSc Public Health for Global Practice	Recommended
MSc Climate Change and Planetary Health	Recommended
MSc Global Mental Health	Recommended

Module Aim and Intended Learning Outcomes

Overall aim of the module
The overall module aim is to: • provide practical experience of planning a research project, designing a study, analysing data in Stata and interpreting results and making recommendations. The study is intended to help students consolidate knowledge and techniques acquired in Term 1 through applying demographic, epidemiological and statistical principles to a practical problem. Students will also find the module good preparation for independent research.

Module Intended Learning Outcomes
Upon successful completion of the module a student will be able to: 1. Identify the steps involved in planning and conducting a research project 2. Formulate research questions and testable hypotheses 3. Plan a study that will test the proposed hypotheses, using an appropriate study design, sample size and mode of data collection 4. Appreciate the principles involved in designing and selecting samples for community surveys 5. Draw conclusions from the results of data analyses, using appropriate tabulations of the data and basic methods of statistical analysis

Indicative Syllabus

Session Content
The module is expected to cover the following topics: • Issues related to epidemiological research • Overview of the stages involved in epidemiological research • Planning of quantitative studies • Research questions and hypothesis formulation • Sampling – covering basic concepts, e.g. simple random sampling, cluster sampling, calculating sample sizes and design effects. • Ethical issues in research • Questionnaire design • Basic data analysis • Skills for the presentation of results

Teaching and Learning

Notional Learning Hours

Type of Learning Time	Number of Hours	Expressed as Percentage (%)
Contact time	34	23
Directed self-study (including recorded lectures)	22	15
Self-directed learning (including unfacilitated in person group work)	58	39
Assessment, review and revision	36	23
Total	**150**	**100**

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
The module teaching includes some lectures followed by structured practicals, following a similar format to STEPH or Basic Statistics for PHP. Some practical exercises will be self-study and these will be supplemented by facilitated sessions to go over the practical exercises with tutors. Much of the course involves self-directed learning in small groups working on one of the assessment tasks (poster presentation). Groups of 4 or 5 students work together to apply concepts introduced in term 1 and in this module to a scenario which is introduced in week 1. The group work sessions are timetabled and most are facilitated; we provide suggestions for what each session should cover but groups are able to work to their own schedule. The group work starts on the first day and it is particularly important for all group members to be present. Attendance in the first week is mandatory and active participation in the group work is required throughout. There is no formative task for this module but there is regular feedback on the progress of the groupwork and a more formal review mid-way through the course.

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 may be used to measure students' progress. The grade for summative assessment(s) only will go towards the overall award GPA. One part of the assessment for this module, the exam, will be on Moodle and taken under exam conditions. The poster component is marked during an in-person presentation (over Zoom for those studying online). The other part of the assessment, the poster, is based on a group work activity and the whole group will receive the same grade. We operate a peer marking scheme for this part of the assessment which may adjust the grades for individual students to reflect differing levels of contribution to this component.

Summative Assessment

Assessment Type	**Assessment Length (i.e. Word Count, Length of presentation in minutes)**	**Weighting** (%)	**Intended Module Learning Outcomes Tested**
Poster Presentation	Short session with each marker, circa 30 minutes total	50	All
Timed Test (in-module test e.g. MCQ)	90 minutes	50	All

Resitting assessment
Resits will accord with Chapter 8a of the LSHTM Academic Manual. The tasks will be (dependent on the assessment that is required): • an individual, short-essay written report answering a reflective-based question, asking the student to evaluate their group-work project, to be submitted within a two-week period by the resit deadline (for those who resit the poster) • a resit combination short-answer/multiple choice question written exam (for those who resit the written exam) For individual students resitting a group assessment there will be an approved alternative assessment as detailed below.

Assessment being replaced	**Approved Alternative Assessment Type**	**Approved Alternative Assessment Length** (i.e. Word Count, Length of presentation in minutes)
Poster Presentation	Coursework	2000 words

Resources

Research methods in health : investigating health and health services
Bowling, Ann,, Fourth edition., Maidenhead, England :, Open University Press, 2014, 9780335262755 (e-book)

Other resources will be available on the Moodle page.

Teaching for Disabilities and Learning Differences

The module-specific site on Moodle gives students access to lecture notes and copies of the slides used during the lecture. Where appropriate, lectures are recorded and made available on Moodle. All materials posted on Moodle, including computer-based sessions, have been made accessible where possible.

LSHTM Moodle is accessible to the widest possible audience, regardless of specific needs or disabilities. More detail can be found in the Moodle Accessibility Statement which can also be found within the footer of the Moodle pages. All students have access to "SensusAccess" software which allows conversion of files into alternative formats.

Student Support Services can arrange learning or assessment adjustments for students where needed. Details and how to request support can be found on the LSHTM Disability Support pages.