Module Specification

ABOUT THIS DOCUMENT

This module specification applies for the academic year 2018-19
Last revised 16 August 2017 by Kathy Baisley and Emma Slaymaker

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GENERAL INFORMATION

<table>
<thead>
<tr>
<th>Module name</th>
<th>Research Design &amp; Analysis</th>
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<tbody>
<tr>
<td>Module code</td>
<td>2423</td>
</tr>
<tr>
<td>Module Organisers</td>
<td>Kathy Baisley and Emma Slaymaker</td>
</tr>
<tr>
<td>Contact email</td>
<td><a href="mailto:Kathy.Baisley@lshtm.ac.uk">Kathy.Baisley@lshtm.ac.uk</a> or <a href="mailto:Emma.Slaymaker@lshtm.ac.uk">Emma.Slaymaker@lshtm.ac.uk</a></td>
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<tr>
<td>Home Faculty</td>
<td>Epidemiology &amp; Population Health</td>
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<tr>
<td>Level</td>
<td>Level 7 (postgraduate Masters 'M' level) of the QAA <a href="https://www.qaa.ac.uk">Framework for Higher Education Qualifications</a> in England, Wales &amp; Northern Ireland (FHEQ)</td>
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<tr>
<td>Credit</td>
<td>15 credits</td>
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<tr>
<td>Accreditation</td>
<td>Not currently accredited by any other body</td>
</tr>
<tr>
<td>Keywords</td>
<td>Research, Epidemiology, Statistics, Quantitative Methods, Planning and programming, Team-work</td>
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AIMS, OBJECTIVES AND AUDIENCE

**Overall aim**

This module aims to provide practical experience of planning a research project and analysing data in Stata. 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.

**Intended learning outcomes**

By the end of this module, students should be able to:

- Identify the steps involved in planning and conducting a research project
- Formulate research questions and testable hypotheses
- Plan a study that will test the proposed hypotheses, using an appropriate study design, sample size and mode of data collection
- Appreciate the principles involved in designing and selecting samples for community surveys
- Draw conclusions from the results of data analyses, using appropriate tabulations of the data and basic methods of statistical analysis

**Target audience**

This module is highly recommended for MSc Demography & Health and MSc Reproductive & Sexual Health Research students
### CONTENT

**Session content**

The module is expected to include sessions addressing 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
- Logistics of data collection
- Basic data analysis
- Skills for the presentation of results

### TEACHING, LEARNING AND ASSESSMENT

**Study resources provided or required**

Module Information can be found on the Virtual Learning Environment (Moodle) containing information about each session and key references for the module. Also available on Moodle are project guidelines, lecture slides, practical worksheets and solutions, supplementary material for data analysis topics, Stata and presentation guidance and sample exam questions. No further resources are required by students.

**Teaching and learning methods**

Students, working in small groups, will formulate research questions and prepare research hypotheses. Much of the module consists of practical small-group or individual work, but within a framework of lectures and discussion covering the key topics. The main exercise is basic data analysis and interpretation using an appropriate demographic data set. Results of the exercise form the basis of a group poster presentation assignment. Due to the groupwork beginning on the first day of the module, please note that it is detrimental to others in your group if you arrive after the start of the module on the Monday or if you decide to transfer to or away from the module after it begins.

**Assessment details**

Participants are assessed by a group work poster presentation (50% of the overall grade awarded for this module) and a written exam with a combination of multiple choice and short answer questions (50% of the overall grade awarded for this module).

Participants must achieve at least a 1 on their exam in order to pass the module.

Resit/deferred/new attempts - 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 re-sit combination short-answer/multiple choice question written exam (for those who resit the written exam)
### Assessment dates
Both assessments will take place during the final week of the module. Resit/deferred/new attempts - the next assessment deadline will be during mid/late September of the current academic year.

### Language of study and assessment
English (please see 'English language requirements' below regarding the standard required for entry).

### TIMING AND MODE OF STUDY

<table>
<thead>
<tr>
<th><strong>Duration</strong></th>
<th>5 weeks at 2.5 days per week</th>
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<tbody>
<tr>
<td><strong>Dates</strong></td>
<td>Monday morning to Wednesday lunchtime</td>
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<tr>
<td><strong>Timetable slot</strong></td>
<td>Term 2 - slot C1</td>
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<td><strong>Mode of Study</strong></td>
<td>The module is taught face-to-face in London. Both full-time and part-time students follow the same schedule.</td>
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### Learning time
The notional learning time for the module totals 150 hours, consisting of:
- Contact time ≈ 34 hours
- Directed self-study ≈ 50 hours
- Self-directed learning ≈ 30 hours
- Assessment, review and revision ≈ 36 hours

### APPLICATION AND ADMISSION

<table>
<thead>
<tr>
<th><strong>Pre-requisites</strong></th>
<th>A working knowledge of Stata is required. Also basic statistics knowledge (e.g. equivalent to STEPH in EPH or Basic Statistics for PHP)</th>
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<tr>
<td><strong>English language requirements</strong></td>
<td>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 <a href="#">English language requirements</a>.</td>
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<tr>
<td><strong>Student numbers</strong></td>
<td>60 (numbers may be capped due to limitations in facilities or staffing)</td>
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<tr>
<td><strong>Student selection</strong></td>
<td>Preference will be given to LSHTM MSc students. Special restrictions apply to LSHTM research degree students wishing to take this module, due to the group work nature; please consult organisers for more information. Other applicants meeting the entry criteria will usually be offered a place in the order applications are received, until any cap on numbers is reached. Applicants may be placed on a waiting list and given priority the next time the module is run. Pre-requisites, as above, will be checked on application.</td>
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