



MODULE SPECIFICATION

Academic Year (student cohort covered by specification)	2020-21
Module Code	2400
Module Title	Study Design: Writing a Study Proposal
Module Organiser(s)	Ian Roberts and Amy Brenner
Faculty	Epidemiology and Public Health
FHEQ Level	Level 7
Credit Value	CATS: 15 ECTS: 7.5
HECoS Code	100962 : 100473
Term of Delivery	Term 2
Mode of Delivery	For 2020-21 this module is delivered online. Teaching will comprise 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	This module presumes an understanding of the material covered in Term 1 modules in Basic or Extended Epidemiology and Statistics for Epidemiology and Population Health. Students who have not attended these modules need to contact the Module Organiser to discuss their eligibility.
Accreditation by Professional Statutory and Regulatory Body	None
Module Cap (Maximum number of students)	70 (numbers may be capped due to limitations in facilities or staffing)
Target Audience	This module is intended for those working in either developing or developed countries. It offers participants an in-depth and highly specific consideration of key issues in the evaluation of the effectiveness of public health interventions.
Module Description	The aim of this module is for students to synthesize their learning from core MSc Epidemiology modules in the design of a research study and write it up in the form of a grant proposal.
Duration	5 weeks at 2.5 days per week
Timetabling slot	Slot C1

Last Revised (e.g. year changes approved)	October 2020
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Programme(s)	Status
This module is linked to the following programme(s)	
MSc Epidemiology	Compulsory
MSc Health Policy, Planning & Finance	Recommended
MSc Public Health	Recommended
MSc Public Health (Environment & Health)	Recommended
MSc Public Health for Development	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"> synthesize learning from core MSc Epidemiology modules through the design of a research study and grant proposal.

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. Define a research question 2. Critique a systematic review of the relevant research evidence and understand the steps needed to avoid systematic and random error 3. Choose an appropriate and ethical epidemiological study design 4. Understand key methodological issues including inclusion and exclusion criteria, sample size and outcome assessment 5. Prepare a detailed protocol encompassing (1) to (4) above

Indicative Syllabus

Session Content
<p>A. Getting Started: Identifying, formulating, and stating the research question</p> <p>B. Study design</p> <p>C. Study Design Methods 1: Study population and sampling</p> <p>D. Study Design Methods 2: Field procedures</p> <p>E. Plans for Analysis</p> <p>F. Pre-study Logistics: Schedule, budget and ethical approval</p> <p>G. Final Considerations (study limitations & dissemination)</p>

Teaching and Learning

Notional Learning Hours

Type of Learning Time	Number of Hours	Expressed as Percentage (%)
Contact time	20	13
Directed self-study	60	40
Self-directed learning	30	20
Assessment, review and revision	40	27
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. 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 (online or on-campus) and self-directed study.

Teaching and Learning Strategy

The teaching and learning strategy combine facilitated group work, lectures and self-directed learning. Most of the module is devoted to the preparation of individual research protocols.

Small groups of students will be given a review of the existing research evidence in a particular topic area that will form the basis of their research protocols. Each group will be facilitated by a staff member who has expertise in the selected topic who will meet with the group each week. The lectures are intended as supplementary to the group and individual work, which are the main part of the module and cover essential research methods needed to prepare a research proposal. There is ample private study time for participants to work on the topic and their proposal. Group members are encouraged to share ideas and discuss general methodological issues and questions of common interest. They will then adapt these and the design to the particular situation and location they have individually chosen but the written assignment must be done individually. In the 3rd week of the module, students will give a presentation to other participants on their work. The aim of this is to get feedback on the design and this session is not assessed.



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.

The assessment for this module will be online.

For their summative assessment, students are asked to prepare a grant application in a structured format. The assessment will be entirely based on this grant application (100%). Each proposal will be reviewed and graded by two staff members, the first of whom will give comments on a standard form used in this study Module, which will be returned to the author normally within 3 weeks of the end of the study Module.

Summative Assessment

Assessment Type	Assessment Length (i.e. Word Count, Length of presentation in minutes)	Weighting (%)	Intended Module Learning Outcomes Tested
Coursework	1500-word report	100	1 – 5

Resitting assessment

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

Resources

Indicative reading list

The main sources for aspects of study design and execution are your epidemiology course notes and the texts you have been recommended. The following sources may also be useful:

1. Oxman A, Cook D, Guyatt GH for the Evidence-based Medicine Working Group. User's Guides to the Medical Literature. VI How to use an overview. *JAMA* 1994;272:1367-1371.
2. PG Smith, RH Morrow and DA Ross (Editors) (2015) *Field Trials of Health Interventions in Developing Countries: a 'toolbox'*. Macmillan. Open access available at for free at <https://global.oup.com/academic>
3. JH Abramson (2008). *Survey Methods in Community medicine: epidemiological studies, programme evaluation, clinical trials*. John Wiley, Chichester UK.
4. Edwards PJ, Roberts I, Clarke M, DiGuseppi C, Pratap S, Kwan, I, Cooper, R, Felix, LM , Kwan I.



- Wentz R Methods to increase response to postal and electronic questionnaires (Cochrane Methodology Review). In: Cochrane Database of Systematic Reviews 2009, Issue 3 Art No: MR000008
5. Treweek, S, Mitchell, E, Pitkethly, M, Cook, J, Kjelstrøm, M, Johansen, M, Taskila, TK, Sullivan, F, Wilson, S, Jackson, C, Jones, R, Lockhart, P. Strategies to improve recruitment to randomized controlled trials. Cochrane Database of Systematic reviews 2010 Issue 4 Art No: MR000013
 6. Bostoen, K and Chalabi, Z. Optimization of household survey sampling without sample frames. *Int J Epidemiology* 2006 35(3) 751-755
 7. Rutterford, C, Copas, A, Eldridge, S Methods for sample size determination in cluster randomized trials *Int J Epidemiology* 2015 1051-1067
 8. Torgerson D, Contamination in trials: is cluster randomisation the answer? *BMJ* 2001; 322: 355 – 357
 9. Altman DG, Bland JM. Statistical Notes: Treatment allocation in controlled trials: Why randomize? *BMJ* 1999; 318:1209.
 10. Altman DG, Schulz KF. Statistical Notes: Concealing treatment allocation in randomized trials. *BMJ* 2001;323: 446-447.
 11. Wacholder S, Silverman D, McLaughlin, J, Mandel J. Selection of Controls in Case-Control Studies. *American Journal of Epidemiology* 1992; 135(9) 1019-50 (3 companion papers on this topic)
 12. Hunt, JR, White, E. Retaining and Tracking Cohort Study Members. *Epidemiologic Reviews* 1998 (20)1 57-70
 13. De Vet H, et al. *Measurement in Medicine (Practical Guides to Biostatistics and Epidemiology)*. Cambridge University Press. 2011
 14. Rothman KJ, Gallacher JE, Hatch EE. Why representativeness should be avoided. *International journal of epidemiology*. 2013 Aug;42(4):1012-4



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](#).