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MEDICINE



MODULE SPECIFICATION

Academic Year (student cohort covered by specification)	2020-21
Module Code	IDM601
Module Title	Research Design, Management and Analysis
Module Organiser(s)	Professor John Ackers
Contact email	The LSHTM distance learning programmes and modules are run in collaboration with University of London Worldwide. Enquiries may be made via the Student Advice Centre . (Enquiries from face-to-face i.e. London-based the LSHTM MSc or research students regarding study of DL modules should be emailed to distance@lshtm.ac.uk .)
Faculty	Infectious & Tropical Diseases: The London School of Hygiene & Tropical Medicine https://www.lshtm.ac.uk/research/faculties/itd
FHEQ Level	Level 7
Credit Value	CATS: 15 ECTS: 7.5
HECoS Code	100962
Mode of Delivery	Distance Learning
Mode of Study	Directed self-study, through provided and online materials
Language of Study	English
Pre-Requisites	There are no formal prerequisites, but in order to successfully complete this module students will need to be comfortable with some concepts and formulae of basic statistics and epidemiology, such as those which are covered in the core module IDM101.
Accreditation by Professional Statutory and Regulatory Body	None
Module Cap (Maximum number of students)	None
Target Audience	Students starting research projects in the field of infectious diseases. This module is particularly recommended for those students who wish to register for the IDM600 Project report.
Module Description	The key role of this module is to help students who wish to become independent researchers understand the whole process of what we call “scientific research,” from a brief



	<p>overview of the underlying ideas of “truth” and “proof,” through the basics of designing and carrying out a scientific study which will produce believable results, to the final step of disseminating the work to the wider public.</p> <p>However, it will also be useful to the wider community - those students who want and need to understand how scientific research is carried out and reported, so that they can become critical judges of the ever-increasing flood of information now available.</p>
Duration	Distance learning module studies begin in early October. Students may start their studies at any time from receipt of study materials and work through the material until the start of the June examinations (although assessment submission deadlines which are earlier than this must be observed).
Last Revised (e.g. year changes approved)	May/2020

Programme(s)	Status
This module is linked to the following programme(s)	
PGDip/MSc Infectious Diseases (Distance Learning - University of London Worldwide)	Elective Option

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"> enable students to develop and understand research projects and to give guidance to those of you who are carrying out a project as part of your MSc degree.

Module Intended Learning Outcomes
<p>Upon successful completion of the module a student will be able to:</p> <ol style="list-style-type: none"> formulate a research question, perform a literature review, prepare a study protocol, identify strengths and weaknesses in research proposals, anticipate and manage problems in the evolution of research projects, present and disseminate research results effectively, organise their MSc dissertation,



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Module Intended Learning Outcomes

8. apply experimental approaches to the study of infections,
9. use social sciences methods in the study of infectious diseases,
10. explain how different approaches and study designs can be used and combined.

Indicative Syllabus

Session Content

The module is expected to cover the following topics:

- **Section 1 An overview of research**

This first section is designed to give you insights into the philosophy of research, framing the actual research question, literature reviews and the ethical conduct of research.

- **Section 2 Planning and managing research**

The six sessions which comprise Section 2 are designed to help students think through different elements of a study and how to bring them together into a study protocol.

- **Section 3 Reporting research**

Section 3 introduces the writing skills needed by those engaged in research. The two sessions explain the purpose and structure of a research report, the second is an exercise in writing the outline of a paper.

- **Section 4 Experimental approaches to the study of infection**

Section 4 illustrates how laboratory research contributes to the understanding of infectious disease. We do this by following a young scientist as she starts working as a research student in a laboratory, studying drug resistance in a human pathogen, and explore various ways of designing experimental studies so that they yield valid data.

- **Section 5 Social science methods and the study of infection**

Section 5 comprises 11 sessions that aim to introduce students to social science research methods and demonstrate how they can be used to help understand transmission and control of infectious diseases and to improve programs and control activities. The section also aims to provide students with skills in interpreting and evaluation social science research.



Teaching and Learning

Notional Learning Hours

Type of Learning Time	Number of Hours	Expressed as Percentage (%)
Directed self-study	100	66.7
Self-directed learning	25	16.7
Assessment, review and revision	25	16.7
Total	150	100

Teaching and Learning Strategy

Learning is self-directed against a detailed set of learning objectives using the materials provided. These materials involve students in focussed reading, reflection, carrying out activities and comparing their conclusions with the feedback provided. Definitions of Key terms, self-test questions and references to optional further reading are also usually provided.

Students are strongly encouraged to participate in the module-specific discussion forums available on Moodle to obtain tutor support, and to make use of the LSHTM online library resources.

Assessment

Assessment Strategy

Students following this Module will be assessed in two ways.

Thirty percent of the final grade will be awarded for the assessed assignment (AA), which must be submitted by 31 March. Full instructions for choosing your AA topic and submitting it are on Moodle; they include two important regulations you need to bear in mind. For this year the assignment topic is to write an outline of a protocol for a research study which aims to contribute to improved control of an infectious disease. Five topics are suggested for students to choose from, but they may submit an assignment on a topic of their own choosing, subject to approval by the MO.

The remaining 70% is awarded for an unseen written exam paper in June. The examination may contain questions based on any of the material in the module handbook and the reader, specifically including those which you will have studied through the electronic sessions. As this is a Master's level course students are reminded that, when marking examiners are always looking for evidence of original thought and critical thinking rather than simply memorised facts.



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Summative assessment

Assessment Type	Assessment Length	Weighting (%)	Intended Module Learning Outcomes Tested
Assessed Assignment	2,500 words	30	1, 2, 3, 5, 6, 7, 8, 9
Exam	2 hours 15 minutes	70	1, 3, 4, 8, 9, 10

Assignments for this module can be submitted once annually, no later than 31st March and must be submitted via the online Assignment Management System.

Unseen written examinations for DL modules are held once a year, in June (including resits). Examinations are normally held in a student's country of residence, in one of over 650 examination centres worldwide. They are arranged mainly through Ministries of Education or the British Council. A list of examination centres can be found at <https://london.ac.uk/current-students/examinations/examination-centres>.

A local fee will be payable direct to the examination centre. This fee is in addition to the programme/module fee and is set by, and paid directly to, the individual examination centres. The level of local examination centre fees varies across the world and neither the University of London nor the LSHTM have any control over the fee amount.

Resitting assessment

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

The Resit assessment will be the same assessment type as the first attempt (see previous table).



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Resources

Indicative reading list

- Smith, P.G., Morrow, R.H. & Ross, D.A., (2015). *Field Trials of Health Interventions – a toolbox*. 3rd ed. OUP. ISBN: 978-0-19-873286-0
- Green, J., & Thorogood, N., (2018). *Qualitative Methods for Health Research*. 4th Ed., Sage. ISBN: 978-1-4739-9711-0.
- Goering, R.V., Dockrell, H.M., Zuckerman, M. and Chiodini, P.L., (2018) *Mims' Medical Microbiology and Immunology*. 6th Ed. ISBN: 978-0702071560.
- Hall, G.M., (2013). *How to Write a Paper*. 5th ed. ISBN:9780470672204.

Other resources

Study Guide: Paper version, plus 2 sessions on an Interactive CD-ROM.

Reader: Reprints of associated journal articles.

In addition to the materials above, students are given access to the **LSHTM Virtual Learning Environment, Moodle** where they can access the study guide, reading list, web-based discussion forums, assignments, supplementary materials and the **LSHTM online library resources**.

Teaching for Disabilities and Learning Differences

The module-specific site on Moodle provides students with access to the module learning materials, including a study guide (with accessible printable versions of sessions) and online reading list (containing essential readings, and textbooks if available), and additional resources including supplementary exercises. 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.

If you have specific, access requirements please contact the Inclusive Practice Manager via special.arrangements@london.ac.uk to request an alternative format of the study guide and for special exam arrangements.