MODULE SPECIFICATION

Academic Year (student cohort covered by specification)	2023-24
Module Code	IDM101
Module Title	Principles of Biostatistics and Epidemiology
Module Organiser(s)	Dr Simon Kigozi and Dr Natalia Bednarska
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	101317:100406 (1:1)
Mode of Delivery	Distance Learning
Mode of Study	Directed self-study, through provided and online materials
Language of Study	English
Pre-Requisites	None
Accreditation by Professional Statutory and Regulatory Body	None
Module Cap (Maximum number of students)	None
Target Audience	This module is intended for those with an interest in infectious diseases who wish to carry out novel research in the field of human health or interpret data published with an aim to change or review policies relevant to public health.

Module Description	This module equips students with the knowledge and skills to analyse and interpret statistical results and epidemiological evidence in medical and public health literature. It is aimed at students with no previous experience in statistics or epidemiology. It is the first of the four core modules that constitute the basic foundation to the Infectious Diseases distance learning programme (and comprise the PG Cert in Infectious Diseases).
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 assessment deadline (although assessment submission deadlines which are earlier than this must be observed).
Last Revised (e.g. year changes approved)	February 2023

Programme(s) This module is linked to the following programme(s)	Status
PGCert/PGDip/MSc Infectious Diseases (Distance Learning - University of London Worldwide)	Compulsory
PGCert/PGDip/MSc Health in Humanitarian Crises (Distance Learning - University of London Worldwide)	Compulsory

Module Aim and Intended Learning Outcomes

Overall aim of the module
The overall module aim is to: • provide students with a solid introduction to epidemiology and statistics upon which further Infectious Diseases modules will build.

Module Intended Learning Outcomes
Upon successful completion of the module a student will be able to:

1. Use and interpret different types of data in medical research.

2. Choose and perform the appropriate statistical technique for the analysis of data given the research question.

3. Apply knowledge of sampling to test hypotheses about populations.

4. Interpret the results of a simple statistical analysis and communicate them in a clear, concise and appropriate manner.

5. Discuss the principles of epidemiology and relate these to the decision-making processes involved in the planning, design and analysis of epidemiological research studies and the interpretation of results.

Indicative Syllabus

Session Content
The module will cover the following topics: • **Section 1: An Introduction to Biostatistics**. This section includes sessions addressing the following topics: introduction to statistical methods for health, describing data, some tools for displaying and analysing quantitative data, regression and correlation analysis, sample size calculations, and statistical computing with STATA. • **Section 2: An Introduction to Epidemiology**. This section contains sessions covering the basic concepts of epidemiology, epidemiological measures of frequency of diseases, association of impacts, research design and interpretation, surveillance, outbreak investigation, validity and reliability of screening and diagnostic tests, ethics in epidemiology and the critical appraisal of research reports.

Teaching and Learning

Notional Learning Hours

Type of Learning Time	Number of Hours	Expressed as Percentage (%)
Directed self-study	100	67
Self-directed learning	15	10
Assessment, review and revision	35	23
Total	**150**	**100**

Teaching and Learning Strategy
Optional formative assignments are available to help students practice some of the principles discussed and obtain tutor feedback. Assignments for this module can be submitted only once annually, no later than 31st March, and must be submitted via the online Assignment Management System.

Assessment

Assessment Strategy
Two optional formative assignments are available.
Formal assessment of this module is a time-limited assessment (100%) in **June**.

Assessment submission deadlines

Formative assignment deadline **31ˢᵗ March** Time-limited assessment taken in **June**

Summative assessment

Assessment Type	Assessment Length	Weighting (%)	Intended Module Learning Outcomes Tested
Time -limited assessment	TBC	100	1 – 5

Formative assignments for this module can be submitted only once annually, no later than **31 March** and must be submitted via the online Assignment Management System. Time-limited assessments for DL modules are held once a year, mostly in June (including resits). Time-limited assessments are held in accordance with University of London's annual guidance. Please note that a separate assessment fee may be payable in addition to the module fee. Further details will be communicated as soon as the final decisions are known.

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). (Note that for those resitting module assessments, a fee will be payable.)

Resources

Indicative reading list

- Kirkwood, B., & Sterne, J., (2003). *Essential Medical Statistics*. 2nd Ed. Wiley-Blackwell. ISBN: 0865428719.

- Celentano, D.D., & Szklo, M., (2019) Gordis *Epidemiology*. 6th Ed. Elsevier. ISBN 9780323552295

Textbooks will be made available in e-format or hard copy to registered students in early autumn.

Other resources

Study Guide: Available online, and to download, via the virtual learning environment

Reader: Online reading list available via the virtual learning environment

Software: STATA

In addition to the materials above, students are given access to the **LSHTM Virtual Learning Environment (VLE; Moodle)** where they can access the study guide, reading list, web-based discussion forums, formative 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), an online reading list (containing essential readings), textbooks in e-format and additional resources, including supplementary exercises and optional lecture recordings (via Panopto). All materials posted in 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 virtual learning environment 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 assessment arrangements.