LONDON SCHOOL of HYGIENE &TROPICAL MEDICINE

MODULE SPECIFICATION

Academic Year (student cohort covered by specification)	2023-24
Module Code	1121
Module Title	Basic Statistics for Public Health & Policy
Module Organiser(s)	Prof Shakoor Hajat & Min Hae Park (Deputy)
Faculty	Public Health & Policy
FHEQ Level	Level 7
Credit Value	**CATS:** 10 **ECTS:** 5
HECoS Code	100406 : 101030 : 101031
Term of Delivery	Term 1
Mode of Delivery	For 2023-24 this module will be delivered by predominantly face-to-face teaching modes. Where specific teaching methods (lectures, seminars, discussion groups) are noted in this module specification these will be delivered by predominantly face-to-face sessions. There will be 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	None
Accreditation by Professional Statutory and Regulatory Body	None
Module Cap (Maximum number of students)	200
Target Audience	This module is for all students requiring an introduction to or consolidation of basic statistical skills.
Module Description	The Basic Statistics for Public Health & Policy module is a core module designed to introduce students to the basic concepts and methods of statistics, as applied in the various disciplines of public health.
Duration	10 weeks at 0.5 days per week
Timetabling slot	Term 1
Last Revised (e.g. year changes approved)	August 2023

Programme(s) This module is linked to the following programme(s)	**Status**
MSc Public Health (General)	Compulsory
MSc Public Health (Environment & Health)	Compulsory
MSc Public Health (Health Economics)	Compulsory
MSc Public Health (Health Promotion)	Compulsory
MSc Public Health (Health Services and Management)	Compulsory
MSc Public Health (Health Services Research)	Compulsory
MSc Public Health for Eye Care	Compulsory
MSc Control of Infectious Diseases	Compulsory

Module Aim and Intended Learning Outcomes

Overall aim of the module
The overall module aim is to: • introduce the basic statistical methods used in public health research. As part of this introduction, students will learn to make practical use of a simple statistical computer package.

Module Intended Learning Outcomes
Upon successful completion of the module a student will be able to: 1. Describe the role of statistical methods in public health research; 2. Present results effectively by making appropriate displays, summaries and tables of data; 3. Appreciate the problem of sampling variation, and the role of statistical methods in quantifying this; 4. Appreciate the importance of sample size calculations; 5. Select an appropriate statistical method for the analysis of simple datasets; 6. Correctly interpret the results of statistical analyses reported in the health literature; 7. Perform simple statistical analyses using STATA; 8. Interpret findings from statistical analyses and present these findings in a clear, concise, and logical manner.

Indicative Syllabus

Session Content
The module is expected to cover the following topics: • Describing data: tables and graphs; proportions; measures of central tendency (mean, median), and spread (range, standard deviation); differences and ratios • Sampling variability: confidence intervals and p-values, especially for means and proportions, and for differences in means and proportions • Sample size calculations • Simple linear regression analysis and correlation coefficients and an introduction to multivariable analysis • Interpreting statistics commonly reported in the health literature • Statistical analyses by computer (using STATA)

Teaching and Learning

Notional Learning Hours

Type of Learning Time	Number of Hours	Expressed as Percentage (%)
Contact time	20	20%
Directed self-study	25	25%
Self-directed learning	15	15%
Assessment, review and revision	40	40%
Total	**100**	**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
Pre-recorded lectures and lecture notes will introduce topics, but students are likely to learn most by working through carefully constructed exercises and discussion in the practical sessions, as well as private study. Some exercises will require using the STATA computer package.

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. There will be a mid-term formative assessment. **For students registering in 2022-23, or thereafter**: The summative assessment for this module will be a data analysis exercise to be submitted in week 0, term 2. **For students initially registered prior to 2022-23**: The summative assessment for this module will be a timed open-book examination as part of summer exams in June 2023.

Summative Assessment for students registering in 2022-23, or thereafter

Assessment Type	Assessment Length (i.e. Word Count, Length of presentation in minutes)	Weighting (%)	Intended Module Learning Outcomes Tested
Data Analysis Exercise	one A4 side of text + up to 3 simple tables or graphical displays.	100%	1 to 8

Summative Assessment for students registering prior to 2022-23

Assessment Type	Assessment Length (i.e. Word Count, Length of presentation in minutes)	Weighting (%)	Intended Module Learning Outcomes Tested
Timed, open-book examination	1000 words	100%	1 to 8

Resitting assessment
Resits will accord with the LSHTM's Resits Policy For students registering in 2022-23, or thereafter: the resit assessment will be a timed multiple-choice test on Moodle. Students registering prior to 2022-23 will re-sit the exam.

Resources

Indicative reading list

- *Medical Statistics at a Glance by Aviva Petrie & Caroline Sabin* [4th edition], published by Blackwell. [Also associated Workbook]
- *Essentials of Medical Statistics by Betty Kirkwood & Jonathan Sterne* [2nd edition], published by Blackwell.
- *An introduction to Medical Statistics by Martin Bland,* published by Oxford University Press

Other resources

Should students wish to have additional practice of each of the topics covered on this module, a large selection of practice questions and solutions are also available on Moodle.

Teaching for Disabilities and Learning Differences

The module-specific site on Moodle provides students with access to lecture notes and copies of the slides used during the lecture prior to the lecture (in pdf format). All lectures are recorded and made available on Moodle as quickly as possible. 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.

For students who require learning or assessment adjustments and support this can be arranged through the Student Support Services – details and how to request support can be found on the LSHTM Disability Support pages.