## GENERAL INFORMATION

<table>
<thead>
<tr>
<th>Module name</th>
<th><strong>Basic Statistics for Public Health and Policy</strong></th>
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<tbody>
<tr>
<td>Module code</td>
<td>PHM102</td>
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<tr>
<td>Module Organiser(s)</td>
<td>Alison Stanley</td>
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**Contact email**
The LSHTM distance learning programmes and modules are run in collaboration with the University of London. Enquiries may be made via their Student Advice Centre at: [www.london.ac.uk/contact-us](http://www.london.ac.uk/contact-us).
(Enquiries from face-to-face i.e. London-based LSHTM MSc or research students regarding study of DL modules should be emailed to distance@lshtm.ac.uk.)

**Home Faculty**
Faculty of Public Health and Policy  
London School of Hygiene & Tropical Medicine  
[http://www.lshtm.ac.uk/php/](http://www.lshtm.ac.uk/php/)

**Level**
This module is at Level 7 (postgraduate Masters level) of the QAA [Framework for Higher Education Qualifications](http://www.hqco.uk/) in England, Wales & Northern Ireland (FHEQ).

**Credit**
LSHTM award 10 credits on successful completion of this module.

**Accreditation**
Not currently accredited by any other body.

**Keywords**
Statistics, Computing using statistical software, Quantitative methods.

## AIMS, OBJECTIVES AND AUDIENCE

**Overall aim**
This module aims to improve students’ understanding of essential statistical methods and their use in public health.

**Intended learning outcomes**
By the end of this module, students should be able to:
- describe the role of statistical methods in public health research;
- present results effectively by making appropriate displays, summaries, and tables of data;
- appreciate the problem of sampling variation, and the role of statistical methods in quantifying this;
- select an appropriate statistical method for the analysis of simple data sets;
- correctly interpret the results of statistical analyses reported in the health literature;
- perform simple statistical analyses using Stata; and
- interpret their findings from statistical analyses and present these findings in a clear, concise, and logical manner.

**Target audience**
Compulsory module for all students on DL MSc/PGDip and PGCert Public Health. This module is compulsory for all students studying the Environment and Health, Health Promotion, Health Services or General streams of the Public Health MSc.
### CONTENT

**Session content**
The module addresses 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;
- simple linear regression analysis and correlation coefficients and an introduction to multivariable analysis;
- statistical analyses by computer (using Stata).

Specific sessions included in the module computer aided learning (CAL) materials are:
- Introduction to basis statistics for public health
- Types of data, summary and data presentation
- Probability and the normal distribution
- Principles of statistical inference
- Inference from a sample mean
- Comparison of two means
- Inference from a sample proportion
- Comparison of two proportions
- Association between two categorical variables
- Correlation
- Linear regression
- Introduction to multi-variable analysis, and
- an optional session of measures of effect in 2 x 2 tables.

### TEACHING, LEARNING AND ASSESSMENT

**Study resources provided or required**
The following materials are provided to students after registration for this module once a year in September/October:
- A brief guide to studying the module.
- A CD-ROM with title "Basic statistics for public health and policy". This contains the CAL sessions that comprise the core of the module.
- The Workbook ("Susan Stirling and Ben Armstrong Basic Statistics for Public Health and Policy"). This contains mainly practical exercises.
- A license pack for Stata software, a statistical package you will learn to use.
- A textbook *Essential Medical Statistics* by Kirkwood and Sterne for back-up reading. A specification of sections relevant to each CAL session is given in the CAL materials.
- A reading list including details of both required and optional reading and links to selected papers.
- Access to the LSHTM Virtual Learning Environment (VLE) - Moodle, where students can access a range of materials, including some of those listed above; participate in module-specific discussion forums and Collaborate sessions and access the LSHTM online library resources.

The CD-ROM, Stata license pack, workbook and textbook will be sent to students. All other materials may be accessed via the LSHTM VLE – Moodle. If your computer does not have a CD drive, the CAL materials are also available via Moodle and the Stata software can be downloaded online as an alternative to using a CD for installation.
| **Teaching and learning methods** | Learning is self-directed against a detailed set of learning objectives identified at the start of each session of the module CAL, which offers interactive learning aids to cover those objectives.

Additional learning materials include: a brief guide to the study module, recommended articles reading from the peer-reviewed literature, Frequently Asked Questions (FAQs), multiple choice progress tests and suggested relevant websites.

Students are strongly encouraged to participate in the module-specific discussions. Student support is available from the module tutors through the online discussion forums and scheduled 1hr ‘live-chat’ sessions on specific topics. Module tutors provide asynchronous feedback for all students on the online discussion forum and offer individual feedback on a formative (non-assessed) assignment submitted by the student. |
| **Assessment details** | Optional formative assessment.

Formal assessment of this module includes a two-hour-15 minute unseen written examination (100%). Students are advised to spend the first 15 minutes reading the paper and planning responses. If students fail the module examination, they are allowed one further attempt. |
| **Assessment dates** | 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.

Unseen written examinations for DL modules are held once a year, in June (including resits). Examinations are normally taken in a student’s country of residence, in one of over 650 examination centres worldwide (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](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. |
| **Language of study and assessment** | English (please see ‘English language requirements’ below regarding the standard required for entry). |
| **TIMING AND MODE OF STUDY** | Distance learning module studies begin in early October. The workbook, Stata license pack, textbook and CD which support the module will be dispatched to registered students in early autumn once fees have been paid. All other module materials will be made available on Moodle. Students may start their studies at any time from the beginning of October and work through the material until the start of the June examinations (although assessment submission deadlines which are earlier than this must be observed).

Tutorial support for distance learning modules is available only from the beginning of October through to the end of May. |
| **Mode of study** | By distance learning. |
| **Learning time** | The notional learning time for the module totals 100 hours, consisting of:

- Computer assisted learning: ≈ 35 hours
- Set textbook selected reading and Moodle participation: ≈15 hours
- Workbook exercises: ≈ 20 hours |
- Formative assignment: ≈ 10 hours
- Additional reading and exam preparation: 20 hours.

## APPLICATION, ADMISSION AND FEES

### Pre-requisites

There are no pre-requisites.

Those wishing to study this module must have regular access to the internet and should register on the LSHTM Virtual Learning Environment (Moodle). The Module Organisers and tutors use Moodle as their primary means of communication with students and use it to make available a range of materials for studying the module. Students are also encouraged to participate in module-specific discussions on Moodle; make use of the online library facilities and will be required to submit assignments via an online assignment management system.

### English language requirements

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 [English language requirements](https://london.ac.uk/applications/costs-your-course/course-fees) with an acceptable score in an approved test taken in the two years prior to entry. Applicants may be asked to take a test even if the standard conditions have been met.

### Student numbers

There is no cap on the number of students who can register for this distance learning module. The number of students actively studying this module varies, but typically approximately 400 students register for the module per year.

### Student selection

This module is available to be studied by students on the following distance learning programmes: DL MSc/PGDip/PGCert Public Health.

Alternatively, students may register for this as an "individual module".

This module is also open to LSHTM research degree students.

### Fees

The current schedule of fees can be viewed at [https://london.ac.uk/applications/costs-your-course/course-fees](https://london.ac.uk/applications/costs-your-course/course-fees) (click on the Postgraduate Fees link).

### Scholarships

Scholarships are not available for individual modules. Some potential sources of funding are detailed on the LSHTM website.

### Admission deadlines

Applications for LSHTM distance learning programmes and modules are managed by the University of London. To apply to take either a formal award (i.e. PG Certificate, PG Diploma or MSc) or an individual module, see [https://london.ac.uk/courses/public-health](https://london.ac.uk/courses/public-health).

Key deadlines are as follows:

- Application deadline: 31 August
- Registration deadline: 30 September (new students and those registering for the project module, PHM305)
- Registration deadline: 31 October (continuing students, with the exception of those registering for the project module PHM305, and those taking individual modules).

**Please note:** The academic year starts 1 October. **Students who register after 1 October should note that module welcome and Collaborate sessions held in October are recorded, but they cannot request an extension to assignment submission deadlines or apply for an examination extenuating circumstance as a result of registering later than 1 October.**

(In-house LSHTM research students wishing to study this module should self-enrol on the module's Moodle area.)
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<th>ABOUT THIS DOCUMENT</th>
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<tr>
<td>This module specification applies for the academic year 2018-19</td>
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<tr>
<td>Last revised/approved June 2018 by Alison Stanley</td>
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<tr>
<td>Further revisions revised [Date / Month / Year], by [Name]</td>
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<tr>
<td>London School of Hygiene &amp; Tropical Medicine, Keppel St., London WC1E 7HT.</td>
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