

# PROGRAMME SPECIFICATION



## 1. Overview

<b>Academic Year (student cohorts covered by specification)</b>	2020-21
<b>Programme Title</b>	Medical Statistics
<b>Programme Director</b>	Kathy Baisley
<b>Awarding Body</b>	University of London
<b>Teaching Institution</b>	London School of Hygiene & Tropical Medicine
<b>Faculty</b>	Epidemiology and Population Health
<b>Length of Programme (months)</b>	MSc - Full time = 12 months, Part time = 24 months
<b>Entry Routes</b>	MSc
<b>Exit Routes</b>	MSc/PGDip/PGCert
<b>Award Titles</b>	MSc in Medical Statistics (180 credits) Exit award: PGDip in Medical Statistics (120 credits) PGCert in Medical Statistics (60 credits)
<b>Accreditation by Professional Statutory and Regulatory Body</b>	Royal Statistical Society
<b>Relevant PGT <a href="#">QAA Benchmark Statement and/or other external/internal reference points</a></b>	<a href="http://www.qaa.ac.uk/docs/qaa/subject-benchmark-statements/sbs-mathematics-15-masters.pdf">http://www.qaa.ac.uk/docs/qaa/subject-benchmark-statements/sbs-mathematics-15-masters.pdf</a>
<b>Level of programme within the Framework for Higher Education Qualifications (FHEQ)</b>	Masters (MSc) Level 7

<b>Total Credits</b>	<b>CATS:</b>	180	<b>ECTS:</b>	90
<b>HECoS</b>	101031			
<b>Mode of Delivery</b>	<p>Students may complete the whole 2020/21 MSc programme online or may choose to come to London in anticipation of some face-to-face teaching.</p> <p>For Medical Statistics: Term 1 core module teaching will be delivered online only, with a combination of synchronous (live and interactive) and asynchronous (recordings, independent study, individual exercises, etc) activities.</p> <p>All terms 2 and 3 modules will be offered online. Certain modules will also have some optional on-campus components. The face to face components may be limited to ensure that UK social distancing rules are adhered to.</p> <p>If at any point during the academic year the UK is forced to go into another period of lockdown, this programme will be delivered using online methods only.</p> <p>Throughout the year there will be programme- and LSHTM-level activities, such as group seminars and a themed lecture series and discussion forums. These will allow students to study the programme safely at a distance but remain together as a community.</p>			
<b>Mode and Period of Study</b>	Full time (12 months) or part time/split study (24 months)			
<b>Cohort Entry Points</b>	Annually in September			
<b>Language of Study</b>	English			
<b>Re-sit Policy</b>	<a href="https://www.lshtm.ac.uk/sites/default/files/academic-manual-chapter-08a.pdf">https://www.lshtm.ac.uk/sites/default/files/academic-manual-chapter-08a.pdf</a>			
<b>Extenuating Circumstances Policy</b>	<a href="https://www.lshtm.ac.uk/sites/default/files/academic-manual-chapter-07.pdf">https://www.lshtm.ac.uk/sites/default/files/academic-manual-chapter-07.pdf</a>			
<b>Programme Description</b>	The programme trains students from a variety of academic backgrounds to work as statisticians in			

	various sectors including higher education, research institutions, the pharmaceutical industry, central government and national health services. It provides training in the theory and practice of statistics with special reference to clinical trials, epidemiology and clinical or laboratory research.
<b>Date of Introduction of Programme (month/year)</b>	1968
<b>Date of production / revision of this programme specification (month/year)</b>	Extraordinary revisions made in August 2020 in response to Covid-19 mitigation planning

## 2. Programme Aims & Learning Outcomes

<b>Educational aims of the programme</b>
The aim of the programme – consistent with LSHTM's mission to improve health worldwide – is to train students from a variety of academic backgrounds to work as statisticians in various sectors including higher education, research institutions, the pharmaceutical industry, central government and national health services. It provides a training in the theory and practice of statistics with special reference to clinical trials, epidemiology and clinical or laboratory research.

### **Programme Learning Outcomes**

By the end of the programme, students will be expected to achieve the following learning outcomes – drawing on material taught across different elements and assessed in a variety of ways.

- (i) Select appropriate study designs to address questions of medical relevance
- (ii) Select and apply appropriate statistical methods for analysing data typically encountered in medical applications, including binary, categorical, count, quantitative data; survival data; hierarchical data; data affected by measurement error and missingness
- (iii) Use a range of software packages to: organise and manage datasets; carry out statistical analysis; construct tables and figures; create programs to provide problem specific solutions.
- (iv) Interpret correctly the results of statistical analyses and critically evaluate the use of statistics in the medical literature
- (v) Communicate effectively with other statisticians and the wider medical community, including the ability to present results of statistical analyses through written and oral presentations
- (vi) Understand the principles behind statistical methods to allow future adoption and appreciation of new methodology, to develop problem specific solutions to new problems, and to provide a basis for the understanding of limitations and issues surrounding currently used methods

### **Teaching and Learning Strategy**

The programme is taught through a variety of synchronous (live and interactive) teaching methods including: online 'live' lectures, small group seminars, practicals, question and answer sessions, and group work with peers. Some teaching will be asynchronous (e.g. pre-recorded lectures, independent exercises). All elements of the programme have specific learning objectives, with content designed to help students achieve these outcomes. Students are expected to learn through both directed and self-directed study.

### **Assessment Strategy**

The programme is assessed through individual module assessments (which may include essays, other written coursework, short written exams, practical exams, group work, presentations or other methods), formal summer exams, and a project report. Such tasks are designed to assess, via the most appropriate method, whether learning objectives have been met. Students will not be required to attend on-campus where assessments can be taken online.

### 3. Programme Structure and features, modules, credit assignment and award requirements

Full-time Masters	Term 1	Term 2	Term 3	Total Credits
Compulsory Modules	5	3		105
Recommended Modules		1	1	30
Projects			1	45

Module information is correct at the time of publication, but minor amendments may be made subject to approval as detailed in [Chapter 3 of the LSHTM Academic Manual](#). Optional (i.e. recommended non-compulsory) modules listed are indicative and may change from year to year. <https://www.lshtm.ac.uk/study/courses/changes-courses>

Term	Slot	Module Code	Module Title	Module Type (compulsory or recommended)	Credits (CATS)	Contact hours*
1	AB1	2001	Basic Epidemiology	Compulsory	10	30
1	AB1	2031	Introduction to Statistical Computing	Compulsory	10	45
1	AB1	2033	Clinical Trials	Compulsory	10	30
1	AB1	2038	Foundations of Medical Statistics	Compulsory	25	90
1	AB1	2475	Robust Statistical Methods	Compulsory	5	13
2	C1	2462	Generalised Linear Models	Compulsory	15	50
2	C2	2402	Statistical Methods in Epidemiology	Compulsory	15	38.5
2	D1	2465	Analysis of Hierarchical and Other Dependent Data	Recommended	15	48
2	D2	2463	Survival Analysis and Bayesian Statistics	Compulsory	15	50

3	E	2412	Advanced Statistical Methods in Epidemiology	Recommended	15	48
3	E	2450	Advanced Statistical Modelling	Recommended	15	42.5

\* 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 on-campus lectures, seminars, demonstrations, tutorials, supervised laboratory workshops, practical classes, project supervision and external fieldwork or visits, 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). These contact hours reflect provision during the 2019/2020 session. We anticipate that in 2020/2021 there will be fewer hours with tutor presence at specified times and a greater emphasis on directed study such as recorded lectures, recommended readings and guided exercises. Please refer to the individual 2020/2021 module specifications for more detail. This definition is based on the one provided by the [Quality Assurance Agency for Higher Education \(QAA\) Explaining contact hours \(2011\) guidance document, page 4 available here](#). Student contact time, together with time allocated for independent study and assessment, determines the total student study hours for a module or programme. Although there are separate hours allocated for each of these activities, they should always be clearly linked together to support effective learning. The London School of Hygiene and Tropical Medicine (LSHTM) defines high quality contact time as structured, focused, purposeful and interactive.

## 4. Entry Requirements

### Criteria for admission

#### General entrance requirements

Applicants must normally satisfy LSHTM's general entrance requirements and additional programme-specific entrance requirements to be considered for admission. Applications must be submitted in accordance with the procedures and deadlines given in the web-based or printed prospectus.

In order to be admitted to a postgraduate taught degree programme of the London School of Hygiene & Tropical Medicine, an applicant must:

- a) hold a first degree at Second Class Honours standard in a relevant discipline, a degree in medicine at the same standard, or another degree of equivalent awarded by an overseas institution recognised by UK Naric or Barrons.

**OR**

- b) hold a professional qualification appropriate to the programme of study to be followed obtained by written examinations and judged by the LSHTM to be equivalent to a Second Class Honours degree or above.

**OR**

- c) have relevant professional experience or training which is judged by the LSHTM to be equivalent to a Second Class Honours degree or above.

**AND**

satisfy any additional requirements where prescribed for admission to a specific programme.

For the MSc Medical Statistics, it is preferred that students should normally have obtained a mathematically-based first degree which includes some statistics. Graduates from other fields who have quantitative skills and some familiarity with statistical ideas may also apply.

In addition, all **suitable** MSc Medical Statistics candidates will be interviewed by the programme's Admissions Team.

For further information, please see:

<https://www.lshtm.ac.uk/study/how-apply/applying-masters-degree-london/you-apply-msc>

### **English language entry requirements**

The English language entry requirement for MSc Medical Statistics is **Band B**.

It is essential that all students have a good command of the English language to benefit from their studies at the LSHTM.

As part of the application process, applicants are required to demonstrate how they meet the LSHTM's minimum English language requirements. This is particularly important for applicants requiring a Tier 4 Student visa, as the UK Home Office dictates that every student from outside the UK and European Union (EU) must show evidence of a minimum level of English language ability (called CEFR1 B2 level), in order for a Tier 4 Student visa to be issued for entry to the UK.

Additionally, the LSHTM asks applicants to have minimum English language proficiency levels that are necessary for our academic programmes. These levels are higher than the CEFR B2 minimum level and also apply to EU applicants, although these will not normally require a Tier 4 Student visa.

The academic English language requirements for each of the LSHTM's programmes are categorised into one of three profiles A, B or C. For information on these three profiles, please refer to the LSHTM English Language Requirement Policy:

[https://www.lshtm.ac.uk/sites/default/files/english\\_language\\_requirements\\_policy.pdf](https://www.lshtm.ac.uk/sites/default/files/english_language_requirements_policy.pdf)