



University of London External Programme

MSc Epidemiology Programme Specification 2007-08

General Information	
Programme title	MSc Epidemiology
Final award	Master of Science
FHEQ level of final award	Masters 'M' Level
Associated programmes (including short courses)	Postgraduate Diploma Some individual core and advanced modules may be taken as Short Courses
FHEQ level of associated award(s)	Masters 'M' Level
Awarding body	University of London
Lead College	London School of Hygiene & Tropical Medicine
Programme Director	Anne Tholen
Mode of study	Distance learning.
Programme accredited by	Not accredited by any other body
Programme started	1999
Study year start date	September
Relevant QAA subject benchmarks	Not applicable
Registration period	Minimum period required is usually 2 academic years. Maximum period is 5 academic years.
Average time to graduation	3-4 years
Teaching Institution attendance required?	No

Admission Details	
Intake quota	No
Admissions requirements	Students must have: Either <ul style="list-style-type: none">A second class honours degree, in health-related disciplines or in statistics or another appropriate subject, from a university or other institution acceptable to the University of London. Work experience in a health sciences/healthcare setting is desirable but not essential. Or <ul style="list-style-type: none">An appropriate professional or technical qualification in a health-related field, which satisfies the University as a qualification equivalent to a second class honours degree, together with at least three years' relevant experience. All students in this category will be considered on an individual basis.

	<p>For all applicants an advanced level of ability to work in English is required. Applicants may be required to pass or to have passed within the last five years, at the appropriate level, a test of proficiency in English acceptable to the University – for example a TOEFL score of 600 (or 250 in the computerised test) and a minimum of 5 in the TWE or a British Council (IELTS) overall score of 7 or over with a minimum of 7 in the written sub-test.</p> <p>All students will be required to have access to a computer with minimum hardware requirements as specified in the prospectus and email access. Internet access is strongly recommended. Students should be familiar with the use of a computer keyboard and mouse, and Microsoft Windows-based software, particularly Microsoft Word and Excel. A calculator is also needed.</p> <p>Refer to the MSc and Postgraduate Diploma in Epidemiology Programme Regulations that are reviewed annually.</p>
<p>Possible exemptions</p> <p>Exemptions are given to students who have qualifications outside the University of London; students will be exempt from subjects but no mark will count.</p> <p>There is currently a limit on the number of exemptions that can be awarded - up to one third of a degree.</p>	<p>None</p>
<p>Credit and transfer/progression arrangements</p> <p>Credits are given to students who have University of London qualifications; students can be credited with the same or equivalent subject previously passed and the mark they achieved will carry.</p>	<p>Applications for credit from students and graduates of the University of London will be considered on a discretionary basis.</p> <p>In order to transfer their registration to the MSc degree from the Postgraduate Diploma, students must normally pass at the required level in each of the four Postgraduate Diploma modules and receive a recommendation from the Examiners that they may proceed to the advanced modules of the MSc. At the discretion of the Examiners, students who have been examined in and have passed three modules only, may be permitted to transfer their registration to the MSc and proceed to the advanced modules (provided the modules passed include <i>Fundamentals of epidemiology</i> and <i>Statistics with computing</i>).</p> <p>Students may be permitted to combine their distance learning study with a period of full-time study at the LSHTM by studying up to two advanced modules at the School (an extra fee would be payable).</p>
Programme Outcomes	
<p>Distinctive features of the Programme</p>	<p>The mission of the LSHTM is to contribute to the improvement of health worldwide through the pursuit of excellence in research, postgraduate teaching, advanced training and consultancy in international public health and tropical medicine. The LSHTM has been active at the highest level in this for many years and has one of the largest groups of epidemiologists in</p>

	<p>the world.</p> <p>Epidemiology is the key discipline underlying medical research, public health practice and health care evaluation. The understanding of its principles and practice is crucial for all people involved in the design or assessment of epidemiological studies and programme evaluation.</p> <p>This distance learning programme is designed to make the LSHTM teaching expertise available to the many people who are unable to come and study in London.</p>
Possible routes to further study	Successful completion of the MSc may allow students to progress to a higher research degree, the MPhil or PhD, where original research is undertaken.
Possible graduate employment routes	The programme is aimed at professionals in academic departments, research modules or the health services. It is suitable for those aiming for a career in epidemiological research, academics in other health areas and health professionals. It will also be of interest to those who are required to understand epidemiology such as medical journalists, and scientific officers in government and industry.

Programme Content and Structure	
Learning aims, objectives and intended outcomes	<p>The aims are to</p> <ul style="list-style-type: none"> • provide students with the appropriate knowledge and skills from which to form a competency in epidemiology • promote students' use of the conceptual and practical tools needed to contribute to initiating research, and understanding developments in their field • provide a framework of critical and evaluative skills that can be used to apply independent scientific judgment • prepare students for a career in research or for further advancement in professional practice. <p>Subject Specific and Intellectual Skills</p> <p>Students will be expected to</p> <ul style="list-style-type: none"> • demonstrate knowledge and understanding of epidemiological methods, and their application to a range of health-related issues • demonstrate knowledge of the main types of epidemiological study and key issues in their use • choose appropriate designs for epidemiological studies • understand the sources of error and bias in epidemiological studies and strategies available to deal with them • develop detailed protocols for epidemiological studies • develop skills in handling data and presenting quantitative results • enter and manage computerised epidemiological data • carry out appropriate statistical analyses of epidemiological data and interpret the results • evaluate critically their own work and studies conducted by other investigators, including critical appraisal of the study question, study design, methods, conduct and analysis. <p>Generic skills</p>

	<p>Students will be expected to develop skills to</p> <ul style="list-style-type: none"> • scrutinize information and critically analyse details • carry out scientific research and evaluate scientific evidence • problem solve • communicate effectively and to undertake intellectual debate.
<p>Learning and teaching methods, including support, guidance, materials provided and study requirements</p>	<p>This MSc is self-taught using the fully comprehensive study materials provided. The delivery of the masters is predominantly computer-based with students using interactive methods within the teaching and learning materials.</p> <p>Students receive support in several ways including:</p> <ul style="list-style-type: none"> • Web-based/email discussion forums supervised by tutors • Email support from subject tutors • Personalised tutorial feedback on set assignments (by email) • Coffee-room conferencing site where students can meet • Contact details of other students on the programme, for support and networking. <p>A registered student will also receive: Programme Regulations, Student handbook, textbooks, CD-ROMs (all but two Epidemiology study modules) and/or paper-based subject guides, readers (containing copies of recent articles etc.) and past examination papers with the Examiners' reports. Certain Epidemiology modules are supplemented with relevant statistical software and workbook/readers.</p>
<p>Programme structure</p>	<p>The MSc consists of all the following:</p> <ul style="list-style-type: none"> • Four compulsory core modules • Two compulsory advanced modules • Four advanced modules selected from a list of options (refer to the Programme Regulations) • A compulsory additional examination paper (draws on materials from all the core modules) • A compulsory Project Report. <p>In any one year students may study and be examined in a maximum of four core modules or six advanced modules, the project report and the additional paper. A student must take and be examined in <i>Fundamentals in epidemiology</i> and <i>Statistics with computing</i> in their first stage of study. In order to proceed to the advanced modules and the Project report, students will normally need to have passed all of the four core modules, and receive a recommendation from the Examiners that they may proceed. At the discretion of the Examiners students who have passed only three core modules (which must include the courses noted above) may be allowed to proceed.</p> <p>A student registered for the MSc degree in Epidemiology may also receive the award of the Postgraduate Diploma in Epidemiology provided they satisfy the requirements for that award.</p> <p>Refer to the MSc and Postgraduate Diploma in Epidemiology Programme Regulations that are reviewed annually.</p>
<p>Syllabus</p>	<ul style="list-style-type: none"> • Four compulsory core modules <i>Fundamentals of epidemiology</i> <i>Statistics with computing</i> <i>Practical epidemiology</i> <i>Writing and reviewing scientific papers</i> • Two compulsory advanced modules

	<p><i>Study design: writing a grant application</i> <i>Statistical methods in epidemiology</i></p> <ul style="list-style-type: none"> • Four optional advanced modules selected from a list of options (refer to the Programme Regulations) • A compulsory additional paper (draws on material from all the core modules) • A compulsory Project Report consisting of one of the following options: <ul style="list-style-type: none"> - Analysis of a dataset - Protocol for a new study - Critical literature review <p>Refer to the MSc and Postgraduate Diploma in Epidemiology Programme Regulations that are reviewed annually.</p>								
Programme Regulations	<p>Refer to the MSc and Postgraduate Diploma in Epidemiology Programme Regulations that are reviewed annually. http://www.londonexternal.ac.uk/current_students/general_resources/regulations/index.shtml</p>								
Assessment methods, including the proportion of the different methods used	<ul style="list-style-type: none"> • Each individual core module will be assessed by one two-hour unseen written paper with the exception of <i>Writing and reviewing scientific papers</i> which will be assessed by a two-part written assignment • Each individual advanced module will be assessed by one two-hour unseen written paper and written assignments with the exception of <i>Study design: writing a grant application</i>. The mark awarded for each module will be based on both the written paper and the written assignment weighted in the scale 70:30. • <i>Study design: writing a grant application</i> will be assessed by a written assignment consisting of a full application to a funding body of between 5000-6000 words. • The additional paper will be assessed by one three-hour unseen written paper which draws on material from all the core modules and is taken at the time the students enter the examination to complete the degree. • The Project report will be assessed by submission of one written report in the form of a scientific paper of 4000 to 7000 words. It is taken in the final year of the degree. <p>Refer to the MSc and Postgraduate Diploma in Epidemiology Programme Regulations that are reviewed annually.</p>								
Marking scheme and classification criteria	<p>The MSc will be awarded with a grading of Distinction, Pass, Fail. The calculation of the unseen written papers, assignments and the final result is provided in the Programme Regulations.</p> <table> <thead> <tr> <th>Mark</th> <th>Class Equivalent</th> </tr> </thead> <tbody> <tr> <td>A</td> <td>Distinction</td> </tr> <tr> <td>B+,B,C</td> <td>Pass</td> </tr> <tr> <td>D,E</td> <td>Fail</td> </tr> </tbody> </table> <p>Refer to the MSc and Postgraduate Diploma in Epidemiology Programme Regulations that are reviewed annually.</p>	Mark	Class Equivalent	A	Distinction	B+,B,C	Pass	D,E	Fail
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A	Distinction								
B+,B,C	Pass								
D,E	Fail								
Estimated study hours overall	<p>In order to complete the programme in the minimum period (two years) a student should be prepared to study between 15-25 hours per week during the annual study year..</p>								
Intellectual development (rationale of progression through programme)	<p>The core modules (<i>Fundamentals of epidemiology</i> and <i>Statistics with computing</i>) provide the basic epidemiological and statistical principles and methods. The following core module <i>Practical epidemiology</i> teaches more</p>								

	<p>practical skills including an introduction to the planning and conduct of epidemiological studies. The final core module <i>Writing and reviewing scientific papers</i> covers critique and writing skills calling on knowledge gained in the first 3 core modules.</p> <p>The compulsory advanced modules build on the skills learnt in the core modules and students learn research study skills and the key statistical skills of analysing and interpreting data.</p> <p>The remaining four optional advanced modules are more specialised and enable students to tailor the programme to suit their own experience and interests.</p> <p>The project report in the final year gives students the opportunity to work on a real epidemiological issue, and to develop and deepen epidemiological skills and concepts learnt throughout the course.</p>
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Quality Assurance	
Particular indicators of quality	<p>The following provide important information on the quality of the Epidemiology programme.</p> <p><i>Assessment procedures</i> External examiners, together with the Board of Examiners approve examination papers and assignments together with the marking schemes.</p> <p>All assessed course work and examinations are blind double marked.</p> <p>External examiners review samples of students' written assignments and examination scripts, and grades awarded.</p> <p><i>Quality of tutoring</i> A system of ongoing review of written tutor feedback is in place.</p> <p><i>Quality of course material</i> All study modules are reviewed by an external assessor, followed by periodic internal review.</p> <p>Annual update of course material as appropriate to take into account tutor and student comments throughout the year.</p> <p><i>Systematic reporting and review</i> A Course Committee meet three times a year to review all current course issues.</p> <p><i>Student feedback</i> Students are invited to complete an evaluation form for each study module completed, and an end of year evaluation form asking about their overall study experience for a given year.</p> <p>Student representatives of the Epidemiology programme are elected each year and are members of the Epidemiology Course Committee.</p> <p>All student feedback is summarised, with action plans produced to deal with issues raised at the end of each academic year. These are approved by the Course Committee and followed through.</p>

<p>Methods of assuring, evaluating and improving quality and standards of the programme</p>	<p>The University of London statute 66 (2), states that: ‘Candidates granted degrees and other awards shall have attained the same academic standard irrespective of mode or place of study or examination.’ Degrees and Diplomas awarded to External students are, therefore, examined to the same standard as those granted to Internal students of the University.</p> <p>In support of this statute, the External Programme and individual Lead Colleges share responsibility for ensuring the quality of External provision. The Quality Assurance Framework for the External Programme defines this shared responsibility and covers areas including:</p> <p><i>The bidding process</i> External programmes must undergo validation & approval under Lead College mechanisms and with reference to national QAA benchmark statements.</p> <p><i>Student and programme management</i> This includes the admission, registration and progression of students, establishment of assessment procedures and appointment of boards of examiners.</p> <p><i>System wide matters</i> Academic policy and development is the responsibility of the External System Lead Colleges Committee, the membership of which is made up of representatives of all the Lead Colleges at Vice-Principal level. The qualifications framework for External programmes outlines the different levels of undergraduate and postgraduate study and the awards which may be made to External students.</p> <p><i>Systematic reporting and the review process</i> External Examiners make annual reports on assessment procedures and standards set and achieved. Annual Programme Reports provide annual summaries of programme information. These reports are considered and acted on as part of an annual review process.</p>
<p>Programme validation/approval</p>	<p>This programme commenced before the introduction of the current Quality Assurance framework for External programmes. Future programme approval or revalidation would be undertaken by the Education Committee and reported to the School Council at the London School of Hygiene & Tropical Medicine.</p>
<p>Appointment of External Examiners</p>	<p>External Examiners for External Programmes are nominated and appointed by the Lead College or Consortium, using approval processes which are parallel with those used for the appointment of External Examiners to Boards of Examiners assessing College-based students.</p>
<p>Student feedback mechanisms</p>	<p>External Programme wide student feedback mechanisms are currently under development therefore no standard data is available yet. LSHTM mechanisms are described earlier under Quality Assurance.</p>

MSc Epidemiology - Course map –

By the end of the course, successful students will have demonstrated achievement of the following:

Objective	Study Module	Assessment method(s)	Comment
<p><u>Overall learning objective</u></p> <p>Demonstrate knowledge and understanding of epidemiological methods, and their application to a range of health-related issues</p>	All Epidemiology study modules, including E400 and the Project Report	Over total MSc: 60% unseen written exams 40% assessed assignments	<p>The E400 Additional paper and the Project Report are taken at the end of the MSc degree and are designed to test the students' overall epidemiological skills and their ability to apply these in practice.</p> <p>Of the 4 optional advanced modules, only one of these has to be Epidemiology - the others may be HSM and ID advanced modules if they wish. Therefore some of the students will have covered more advanced epidemiological material than others.</p>
<u>Specific learning objectives</u>			
1. Demonstrate knowledge of the main types of epidemiological study and key issues in their use	EP101 Fundamentals of Epidemiology	Unseen written exam	
2. Choose appropriate designs for epidemiological studies	EP103 Practical Epidemiology EP201 Study Design	Unseen written exam Assessed assignment	
3. Understand the sources of error and bias in epidemiological studies and strategies available to deal with them	EP101 Fundamentals of Epidemiology EP103 Practical Epidemiology	Unseen written exam Unseen written exam	
4. Develop detailed protocols for epidemiological studies	EP103 Practical Epidemiology (basic introduction) EP 201 Study Design	Unseen written exam Assessed assignment	Students may write a protocol for a new study for the Project report
5. Develop skills in handling data and presenting quantitative results	EP102 Statistics with Computing	Unseen written exam	

Objective	Study Module	Assessment method(s)	Comment
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6. Enter and manage computerised epidemiological data	EP103 Practical Epidemiology	Unseen written exam	
	EP301 Epidemiology of Communicable diseases (optional module)	70% unseen written exam and 30% assessed assignment (group)	EP301 includes group work of investigating a disease outbreak
7. Carry out appropriate statistical analyses of epidemiological data and interpret the results	EP102 Statistics with Computing (basic only)	Unseen written exam	Assessed also by the E400 Additional paper
	EP103 Practical Epidemiology (basic only)	Unseen written exam	
	EP202 Statistical Methods in Epidemiology	70% unseen written exam and 30% assessed assignment	
	EP304 Advanced Statistical Methods in Epidemiology (optional module)	70% unseen written exam and 30% assessed assignment	
8. Evaluate critically both students' own work and studies conducted by others, including critical appraisal of the study question, study design, methods, conduct and analysis	EP105 Writing and reviewing scientific papers	Assessed assignment - Writing a scientific paper - Critique of a scientific paper	Assessed also by the E400 Additional paper Students may write a systematic review for the Project report