

Module Specification



**UNIVERSITY
OF LONDON**
INTERNATIONAL
PROGRAMMES

LONDON
SCHOOL of
HYGIENE
& TROPICAL
MEDICINE



GENERAL INFORMATION

Module name	Fundamentals of Epidemiology
Module code	EPM101
Module Organiser(s)	Jenny Evans, Laura Oakley, Rhea Harewood
Contact email	The LSHTM distance learning programmes and modules are run in collaboration with the University of London International Programmes. Enquiries may be made via their Student Advice Centre at: www.londoninternational.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 Epidemiology and Population Health London School of Hygiene & Tropical Medicine http://www.lshtm.ac.uk/eph/
Level	This module is at Level 7 (postgraduate Masters level) of the QAA Framework for Higher Education Qualifications in England, Wales & Northern Ireland (FHEQ).
Credit	LSHTM award 15 credits on successful completion of this module.
Accreditation	Not currently accredited by any other body.
Keywords	Epidemiology; Research methods; Quantitative methods; Statistics.

AIMS, OBJECTIVES AND AUDIENCE

Overall aim	This module aims to introduce students to the basic ideas and methods of epidemiology.
Intended learning outcomes	By the end of this module, students should be able to: <ul style="list-style-type: none"> • describe the main uses of epidemiology • describe, apply and interpret correctly epidemiological measures, including measures of disease frequency, measures of effect, measures of infectiousness, and measures of public health impact • state the uses, strengths and limitations of routine data sources • identify and state the key considerations in the planning and design of epidemiological studies • summarise the key concepts and implications of the major potential sources of error in epidemiological studies (bias, confounding and measurement error) and discuss strategies to minimise them • summarise the concept of effect modification (interaction) and know how to apply a strategy to address this • describe and apply the concepts of misclassification and validity of disease and exposure measurements • judge the adequacy of evidence supporting causal links between exposure and disease • describe the principles and evaluate the relative merits of different study designs, including the main analytic methods available

	<ul style="list-style-type: none"> • select an appropriate study design to address specific epidemiological questions • describe the key characteristics of an effective surveillance programme • understand what screening is, when it is used and how it can be evaluated. 																																												
Target audience	Fundamentals of Epidemiology is a core module for all students on the DL PGCertificate/PGDiploma/MSc Epidemiology and Demography & Health programmes. It can also be taken as an elective module by those studying the DL PG Diploma/MSc in Global Health Policy and as an “individual module” for those wishing to gain a basic understanding of epidemiology before deciding whether to take further training in this field. This may include clinicians, public health officials, nurses and other healthcare providers as well as those working indirectly in health such as medical journalists and scientific officers in government and industry.																																												
CONTENT																																													
Session content	<p>The module includes sessions addressing the following topics:</p> <table border="1"> <thead> <tr> <th>Session</th> <th>Title</th> </tr> </thead> <tbody> <tr><td>FE00</td><td>Overview of Fundamentals of Epidemiology</td></tr> <tr><td>FE01</td><td>Introduction to epidemiological methods</td></tr> <tr><td>FE02</td><td>The epidemiological focus: cases and populations</td></tr> <tr><td>FE03</td><td>Measures of occurrence</td></tr> <tr><td>FE04</td><td>Using routine data in epidemiology</td></tr> <tr><td>FE05</td><td>Measures of effect</td></tr> <tr><td>FE06</td><td>Measures of impact</td></tr> <tr><td>FE07</td><td>Transmission of infection</td></tr> <tr><td>FE08</td><td>Overview of study design</td></tr> <tr><td>FE09</td><td>Confounding and effect modification</td></tr> <tr><td>FE10</td><td>Standardisation</td></tr> <tr><td>FE11</td><td>Bias</td></tr> <tr><td>FE12</td><td>Measurement of error: validity and reliability</td></tr> <tr><td>FE13</td><td>From association to causation</td></tr> <tr><td>FE14</td><td>Cross-sectional studies</td></tr> <tr><td>FE15</td><td>Cohort studies</td></tr> <tr><td>FE16</td><td>Case-control studies</td></tr> <tr><td>FE17</td><td>Intervention studies</td></tr> <tr><td>FE18</td><td>Ecological studies</td></tr> <tr><td>FE19</td><td>Surveillance</td></tr> <tr><td>FE20</td><td>Screening</td></tr> </tbody> </table>	Session	Title	FE00	Overview of Fundamentals of Epidemiology	FE01	Introduction to epidemiological methods	FE02	The epidemiological focus: cases and populations	FE03	Measures of occurrence	FE04	Using routine data in epidemiology	FE05	Measures of effect	FE06	Measures of impact	FE07	Transmission of infection	FE08	Overview of study design	FE09	Confounding and effect modification	FE10	Standardisation	FE11	Bias	FE12	Measurement of error: validity and reliability	FE13	From association to causation	FE14	Cross-sectional studies	FE15	Cohort studies	FE16	Case-control studies	FE17	Intervention studies	FE18	Ecological studies	FE19	Surveillance	FE20	Screening
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TEACHING, LEARNING AND ASSESSMENT																																													
Study resources provided or required	<p>The following materials are provided to students after registration for this module once a year in September/October:</p> <ul style="list-style-type: none"> • Epidemiology Core Module DVD-Rom (EPM101/102/103) • EPM101 Fundamentals of Epidemiology Reader <p><u>Textbooks:</u></p> <ul style="list-style-type: none"> • <i>Epidemiology in Medicine</i> (Hennekens, Buring). <p>In addition to the materials above, students are given access to</p> <ol style="list-style-type: none"> i) the LSHTM Virtual Learning Environment, Moodle, which contains resources such as discussion forums and supplementary programme materials and ii) the LSHTM online library. 																																												

Teaching and learning methods	<p>Learning is self-directed against a detailed set of learning objectives using the materials provided. The key learning methods are:</p> <ul style="list-style-type: none"> • Reading and reflecting on CAL (computer-assisted learning) materials which introduce, explain and apply the principles and methods covered in the module. • Reading and reflecting on provided materials which support the learning in the CAL sessions. This may include making use of the LSHTM online library resources. • Accessing academic support which is available from the module tutors through the web-based discussion forums and real-time sessions (using Blackboard Collaborate) in which students are encouraged to participate. • Completing formative assignment(s) and reflecting on written feedback from module tutors.
Assessment details	<p>Formal assessment of this module includes a two-hour unseen written examination with 15 minutes' additional reading/planning time (100%).</p> <p>If students fail the module overall, they are allowed one further attempt at the examination.</p>
Assessment dates	<p>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 www.londoninternational.ac.uk/community-support-resources/current-students/examinations/examination-centres.</p> <p>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 International Programmes nor the LSHTM have any control over the fee amount.</p> <p>For students who are required to re-sit, or granted a deferral or new attempt at the written examination, the next examination date will normally be the following June.</p>
Language of study and assessment	<p>English (please see 'English language requirements' below regarding the standard required for entry).</p>
TIMING AND MODE OF STUDY	
Duration	<p>Students may start their studies at any time from receipt of study materials (despatched annually usually during September/October, depending on date of registration) and work through the material until the start of the June examinations (although assessment submission deadlines which are earlier than this must be observed).</p> <p>Students registering after September (continuing and individual modules students only) should note that introductory messages, and some online activities (for example discussion forums and/or real-time welcome sessions) may have already taken place before they get access to the Virtual Learning Environment (Moodle). All such messages and recordings (where applicable) will be available to access throughout the study year.</p>
Dates	<p>Tutorial support for this module is available from the beginning of October through to the examination in June.</p>
Mode of study	<p>By distance learning.</p>

Learning time	<p>The notional learning time for the module totals 150 hours, consisting of:</p> <ul style="list-style-type: none"> • Directed self-study (reading and working through the provided module material) ≈ 100 hours • Self-directed learning (general reading around the subject, library, Moodle discussion forums) ≈ 20 hours • Assessment, review and revision ≈ 30 hours
APPLICATION, ADMISSION AND FEES	
Pre-requisites	<p>Note for Epidemiology programme students: students are encouraged to complete EPM102 at the same time as EPM101.</p> <p>Those wishing to study this module must have regular access to the internet to participate in module-specific discussions on Moodle, benefit from online library facilities and submit assignments.</p>
English language requirements	<p>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, 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.</p>
Student numbers	<p>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 approx. 250 students register for the module per year.</p>
Student selection	<p>This module is compulsory for students registered on the DL PG Certificate/PG Diploma/MSc Epidemiology and Demography & Health Programmes. It can also be taken as an elective module by those studying the DL PG Diploma/MSc in Global Health Policy.</p> <p>Alternatively, students may register for this as an “individual module”.</p> <p>This module is also open to LSHTM research degree students via the mixed mode study option.</p>
Fees	<p>The current schedule of fees can be viewed at www.londoninternational.ac.uk/fees (click on the LSHTM programme link).</p>
Scholarships	<p>Scholarships are not available for individual modules. Some potential sources of funding are detailed on the LSHTM website.</p>
Admission deadlines	<p>Applications for LSHTM distance learning programmes and modules are managed by the University of London International Programmes. To apply to take either a formal award (i.e. PG Certificate, PG Diploma or MSc) or an individual module, click the relevant link on the right hand side of the page at http://www.londoninternational.ac.uk/courses/postgraduate/lshtm/epidemiology-msc-postgraduate-diploma-postgraduate-certificate</p> <p>Key deadlines are as follows:</p> <ul style="list-style-type: none"> ➤ Application deadline: 31 August (<i>Note: applicants who submit applications on or after 1 June 2017 will be required to pay an application fee of £100 at the point of submission, which will be deducted from the balance of fees payable upon registration. If the application does not result in registration, the application fee will not be refunded. No application fee will apply to applications submitted on or before 31 May 2017.</i>) ➤ Registration deadline: 30 September (new students) ➤ Registration deadline: 31 October (continuing students and those registering to study the module as an individual module)

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 note information given in the mixed mode study option links for DrPH/research degree students at:

http://intra.lshtm.ac.uk/edu/researchdegrees/rdsupportframework/profdev/rd_mixedmodeinformation.pdf)

ABOUT THIS DOCUMENT

This module specification applies for the academic year 2017-18

Last revised/approved [01 / 03 / 2017], by [Laura Oakley]

Further revisions revised [Date / Month / Year], by [Name]

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