

# Module Specification (Distance Learning)

In collaboration with University of London International Programmes



1. Title:	<b>Fundamentals of Epidemiology</b>						
2. Module code:	EPM101						
3. Institution:	Faculty of Epidemiology and Population Health London School of Hygiene & Tropical Medicine Keppel Street London WC1E 7HT <a href="http://www.lshtm.ac.uk/eph/">http://www.lshtm.ac.uk/eph/</a>						
4. Module Organisers:	Jenny Evans, Laura Woods						
5. Mode of study:	Distance learning						
6. Type:	Core module						
7. Duration and dates:	<p>Deadlines if taken as part of a formal award:</p> <p>Application deadline: 30 June each year</p> <p>Registration deadline: 31 August each year</p> <p>Course registration duration: Up to 5 years</p> <p>Course starts: 1 October each year</p> <p>Examination takes place: Usually June each year (date to be confirmed)</p> <p>Deadlines if taken as an individual module (i.e. not registered for formal award):</p> <p>Application deadline: 31 August each year</p> <p>Registration deadline: 30 November each year</p> <p>Registration duration: 2 years</p> <p>Module study starts: 1 October each year</p> <p>Examination takes place: Usually June each year (date to be confirmed)</p>						
8. Credit points:	15 credit points will be awarded on successful completion of this module at Masters level (Level 7).						
9. Notional Learning Hours (NLH):	<p>The module should take about 150 hours to complete. On average students will divide these learning hours as follows:</p> <table border="0"> <tr> <td>Directed self-study</td> <td>70 hours</td> </tr> <tr> <td>Self-directed learning</td> <td>30 hours</td> </tr> <tr> <td>Assessment, review and revision</td> <td>50 hours</td> </tr> </table>	Directed self-study	70 hours	Self-directed learning	30 hours	Assessment, review and revision	50 hours
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10. Aim:	This module aims to introduce students to the basic ideas and methods of epidemiology.						
11. Learning objectives:	<p>On completing of this module students should be able to:</p> <ul style="list-style-type: none"> <li>• describe the main uses of epidemiology</li> <li>• calculate measures of disease frequency, measures of effect and measures of impact, and know when to use each measure</li> <li>• discuss the main types of epidemiological study including their strengths and weaknesses and when to use them</li> <li>• choose an appropriate study design to address a specific epidemiological question</li> <li>• describe the major potential sources of error (bias, confounding and measurement error) and discuss strategies to minimise them</li> <li>• calculate sensitivity, specificity, positive and negative predictive values of a clinical test</li> </ul>						

	<ul style="list-style-type: none"> <li>• estimate the validity and reliability of a clinical test</li> <li>• assess whether an association is likely to be causal</li> <li>• describe the key characteristics of an effective surveillance programme</li> <li>• understand what screening is, when it is used and how it can be evaluated.</li> </ul>																																												
12. Content:	<p>Module content is structured around the self-study sessions listed below:</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>Experimental 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	Experimental studies	FE18	Ecological studies	FE19	Surveillance	FE20	Screening.
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13. 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"> <li>- Reading and reflecting on CAL (computer-assisted learning) materials which introduce, explain and apply the principles and methods covered in the module.</li> <li>- Reading and reflecting on paper-based materials which support the learning in the CAL sessions.</li> <li>- Accessing academic support which is available from the module tutors through the web-based discussion forum in which students are encouraged to participate.</li> <li>- Completing formative assignment(s) and reflecting on written feedback from module tutors.</li> </ul>																																												
14. Study resources provided:	<p>Epidemiology Core Module CD-Rom (EPM101/102/103) EPM101 Fundamentals of Epidemiology Reader</p> <p><u>Textbooks:</u> Epidemiology in Medicine (Hennekens, Buring).</p> <p>Registered students have access to the School's online library resources.</p>																																												
15. Assessment procedures:	<p>Formal assessment of the module consists of a two-hour unseen written examination.</p> <p>Examinations are normally held in a student's country of residence, in one of over 650 examination centres worldwide. They are arranged mainly through Ministries of Education or the British Council. A local fee will be payable. A list of examination centres can be found at <a href="http://www.londoninternational.ac.uk/current_students/general_resources/exams/exam_centres/index.shtml">http://www.londoninternational.ac.uk/current_students/general_resources/exams/exam_centres/index.shtml</a>.</p>																																												

	If students fail an examination at the first entry they will be allowed one further attempt, the following year.
16. Prerequisites:	<p>Note for Epidemiology course 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 benefit from library facilities, participate in web-based conference discussions and submit assignments.</p> <p>Students must meet the standard of English required to study this course. See <a href="http://www.lshtm.ac.uk/prospectus/english.html">http://www.lshtm.ac.uk/prospectus/english.html</a>.</p>
17. Attendance:	No maximum number
18. Selection, if applicable:	This module is compulsory for students registered on the <u>PG Certificate/PG Diploma/MSc Epidemiology</u> courses; alternatively, it can be taken as an Individual Module. It can also be taken as an elective module by those studying the PG Diploma/MSc in Clinical Trials.
19. Fees:	For current schedule of fees see <a href="http://www.londoninternational.ac.uk/fees/schedules/lshtm.pdf">http://www.londoninternational.ac.uk/fees/schedules/lshtm.pdf</a> .
20. Scholarships:	None available
21. External accreditation:	None
22. Application process:	Applications are managed by the University of London International Programmes (website: <a href="http://www.londoninternational.ac.uk/">http://www.londoninternational.ac.uk/</a> ).
23. Further enquiries:	Enquiries may be emailed to <a href="mailto:distance@lshtm.ac.uk">distance@lshtm.ac.uk</a> .