

Module Specification (Distance Learning)

In collaboration with the University of London International Programmes



1. Title:	Environmental Epidemiology
2. Module code:	PHM205
3. Institution:	Faculty of Public Health and Policy London School of Hygiene & Tropical Medicine Keppel Street London WC1E 7HT http://www.lshtm.ac.uk/php/
4. Module Organiser:	Cathryn Tonne; Deputy: Paul Wilkinson
5. Mode of study:	Distance learning
6. Type:	Elective 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>On average the module should take about 100 hours to complete, consisting of the following:</p> <ul style="list-style-type: none"> • Main reading and web-based discussion forum participation: 60 hours • Additional reading materials and exercises: 10 hours • Assignments and exam preparation: 30 hours
10. Aim:	This module aims to foster students' understanding of the main themes in environmental epidemiology, with particular emphasis on methods of investigation, including those of time-series and spatial analysis.
11. Learning objectives:	<p>On completing this module students should be able to:</p> <ul style="list-style-type: none"> • describe the main methodological issues in environmental epidemiology, specifically those relating to the investigation of the health effects of pollution of air, water and land, and the health effects of ionizing and non-ionizing radiation • assess and critically interpret scientific data relating to potential environmental hazards to health • plan, conduct and interpret the initial investigation into a putative disease cluster • describe the principles of geographical and time-series studies for the investigation of the health effects of environmental exposures, and the specific value of Geographical Information Systems as an investigative tool • outline the evidence about global climate change and the methods for assessing its potential health impacts.

12. Content:	<p>The module focuses on the basis of knowledge about environmental risks to human health – how do we know what we think we know about environmental hazards. It covers many of current topics in environmental public health – pollution of the air, water, land; ionizing and non-ionizing radiation; water and health; climate change; and emerging issues. Much of the content is about the methods of studying environmental risks to health including time-series and GIS-based geographical methods, issues of exposure assessment and risk assessment. In addition to the course book, various electronic resources (statistical analyses, sequential exercises) are made available to illustrate particular methods and points of interpretation.</p> <p>The course begins with consideration of the epidemiological issues arising in cluster investigations, covering both practical public health questions about immediate response as well as the complexities of performing and interpreting formal epidemiological studies. The course then moves on to consider air pollution epidemiology, introducing time series studies and comparing their evidence with that of geographical studies. Next chapters go on to consider ionizing and non-ionizing radiation, followed by consideration of hazardous (land) waste, using examples of studies of risk of congenital anomalies. Discussion of water-related health risks covers both global challenges of access to clean water, as well as the hazards associated with wastewater use in agriculture. The following chapters on climate change present a framework for understanding climate and health links, with ensuing discussion of extreme weather events and vector-borne disease. The final chapters of the course book provide a framework, with examples, for reviewing epidemiological evidence on environment and health risks, followed by an introduction to some emerging themes.</p>
13. Learning methods:	<p>Learning is self-directed against a detailed set of learning objectives that are identified at the start of each chapter of the module textbook, which also offers focused reading and various learning activities. The module textbook is <i>Environmental Epidemiology</i> by Paul Wilkinson.</p> <p>Additional learning materials include: a brief guide to the study module, recommended reading from the peer-reviewed literature, Frequently Asked Questions (FAQs) and suggested relevant websites. There are also practical exercises, including opportunities to carry out statistical analysis relevant to cluster investigations and time-series.</p> <p>Student support is available from the module tutors through the web-based discussion forum. Module tutors provide written feedback for all students on the discussion forum and offer individual feedback on an assessed assignment submitted by the student.</p>
14. Assessment procedures:	<p>Students will be assessed by one or more assignments, which count 30% towards the overall grade for the module and by a two-hour unseen written examination, which will contribute 70% of the total grade for the module.</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 http://www.londoninternational.ac.uk/current_students/general_resources/exams/exam_centres/index.shtml.</p> <p>If students fail an examination at the first entry they will be allowed one further attempt, the following year.</p>
15. Prerequisites:	<p>Those wishing to study this module should have regular access to the internet to benefit from library facilities, participate in web-based discussions and submit assignments.</p>

	<p>Students must meet the standard of English required to study this course. See http://www.lshtm.ac.uk/prospectus/english.html.</p> <p>A reasonable understanding of epidemiological principles is assumed (successful completion of the Basic Epidemiology module or equivalent).</p>
16. Attendance:	No maximum number
17. Selection, if applicable:	<p>This module is available to students registered for the MSc in Public Health, Clinical Trials, Epidemiology, Global Health Policy and Infectious Diseases courses; alternatively, it can also be taken as an individual module. It can also be taken by those studying for the PG Diploma Public Health, Clinical Trials, Global Health Policy, and Infectious Diseases courses under the credit framework scheme.</p> <p>This module is recommended for students studying the Environment and Health stream of the Public Health MSc.</p>
18. Fees:	For current schedule of fees see http://www.londoninternational.ac.uk/fees/schedules/lshtm.pdf .
19. Scholarships:	None available
20. External accreditation:	None
21. Application process:	Applications are managed by the University of London International Programmes (website: http://www.londoninternational.ac.uk/).
22. Further enquiries:	Enquiries may be emailed to distance@lshtm.ac.uk .