# MODULE SPECIFICATION

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| **Academic Year** | 2026-27 |
| **Module Code** | PHM205 |
| **Module Title** | Environmental Epidemiology |
| **Module Organiser(s)** | Peninah Murage and Ana Bonell |
| **Contact email** | For students studying University of London awards (initial registration 2025/2026 and prior years): Enquiries may be made via their Student Advice Centre at: Student Advice Centre.<br><br>For students studying LSHTM awards (registration in 2026/2027 and onwards): Enquiries should be emailed to: PHsupport@lshtm.ac.uk |
| **Faculty** | Public Health & Policy |
| **FHEQ Level** | Level 7 |
| **Credit Value** | **CATS:** 15<br>**ECTS:** 7.5 |
| **Mode of Delivery** | Distance Learning |
| **Mode of Study** | Directed self-study, through online materials (Virtual Learning Environment) |
| **Language of Study** | English |
| **Pre-Requisites** | All students will require a sound basic knowledge of epidemiology as gained by completion of the core module PHM101 Basic Epidemiology or similar (including familiarity with major epidemiological study designs, confounding factors, regression methods and the interpretation of regression coefficients). If students have concerns about these pre-requisites they should contact PHsupport@lshtm.ac.uk before registering for the module. |
| **Accreditation by Professional Statutory and Regulatory Body** | None |
| **Module Cap (Maximum number of students)** | None |
| **Target Audience** | This module is available to students registered for the DL MSc and PGDip in Public Health. For students who first registered for the MSc Public Health (UoL) prior to 2026/27 the module |

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| | is recommended for students studying the Environment and Health stream. The module is also open to students on the DL PGDip/MSc Clinical Trials, Epidemiology and Global Health Policy programmes. Alternatively, it can also be taken as an individual module.<br><br>An understanding of basic epidemiological principles is assumed (see Pre-Requisites). There is a focus on methods and principles. The module is relevant to both high- and low-income settings, but there is greater emphasis on examples and methods from higher-income settings. |
| **Module Description** | The module focuses on understanding of the epidemiological methods by which evidence has been obtained on environmental risks to health: how we know what we think we know about such risks. Its main focus is therefore on principles, methods, interpretation and critical thinking. It concentrates on methods common in environmental epidemiology, including time series studies and risk assessment methods, and considers the evidence for the main areas of current interest in environmental epidemiology. These include: air pollution, wastewater reuse, ionizing and non-ionizing radiation, climate change/planetary health, as well as disease cluster investigations. The intention is to equip students with a good understanding of how to design an epidemiological study, to investigate an environmental hazard to health and how to interpret evidence from published literature. |
| **Duration** | Studies for distance learning modules begin in early October. At this time, module materials will be made available on Moodle. Students may start their studies at any time from the beginning of October and work through the material until the start of the June assessments. However, students are encouraged to commence their studies in October and work steadily through the materials over the course of the academic year and must adhere to other assessment submission deadlines. |
| **Last Revised (e.g. year changes approved)** | May 2026 |

**For students studying UoL awards (initial registration in 2025/2026 and prior years)**

| **Programme(s)**<br>This module is linked to the following programme(s) | **Status** |
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| MSc Public Health: Environment and Health (Distance Learning - University of London Worldwide) | Recommended Elective |

| Programme(s)<br>This module is linked to the following programme(s) | Status |
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| MSc Public Health (General Stream) (Distance Learning - University of London Worldwide) | Elective |
| MSc Public Health: Health and Promotion (Distance Learning - University of London Worldwide) | Elective |
| MSc Public Health: Health Services Management (Distance Learning - University of London Worldwide) | Elective |
| MSc Public Health: Health Economics (Distance Learning - University of London Worldwide) | Elective |
| PGDip Public Health (Distance Learning - University of London Worldwide) | Elective |
| PGDip/MSc Global Health Policy (Distance Learning - University of London Worldwide) | Elective |

**For students studying LSHTM awards (registration in 2026/2027 and onwards)**

| Programme(s)<br>This module is linked to the following programme(s) | Status |
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| PGDip Public Health (Distance Learning) | Elective |
| MSc Public Health (Distance Learning) | Elective |
| PGDip Global Health Policy (Distance Learning) | Elective |
| MSc Global Health Policy (Distance Learning) | Elective |

## Module Aim and Intended Learning Outcomes

| Overall aim of the module |
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| The overall module aim is to:<br>• Develop students' ability to apply theoretical and practical tools in designing and analysing the studies in environmental epidemiology, with main emphasis on the industrialized world. |

| Module Intended Learning Outcomes |
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| Upon successful completion of the module a student should be able to:<br>1. Explain the main methodological issues in environmental epidemiology, specifically concerning the investigation of the health effects of pollution of air, water and land, including the effects of ionizing and non-ionizing radiation and climate change;<br>2. Assess and critically interpret scientific data relating to potential environmental hazards to health;<br>3. Plan, conduct and interpret the initial investigation into a putative disease cluster;<br>4. Explain and illustrate the principles of semi-ecological cohort, time-series and case-crossover studies for the investigation of the health effects of environmental exposures.<br>5. Describe and apply methods of quantitative risk assessment in real environmental health issues. |

## Indicative Syllabus

| Session Content |
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| The module is expected to cover the following topics:<br>• Key issues in environmental epidemiology, including methods for investigating environmental hazards<br>• Solutions for abating environmental hazards with health co-benefits; includes policy, nature-based and technical interventions<br>• Investigation of the health effects of: air pollution, climate change, ionizing radiation, , non-ionizing radiation, water-related health risks and other hazardous waste.<br>• Disease cluster, covering practical public health questions and complexities of performing and interpreting formal epidemiological studies;<br>• Time-series analysis of health and environmental data (computer-based practical);<br>• Health impact assessment (computer-based practical);<br>• A framework for evaluating epidemiological evidence on environment and health risk. |

## Teaching and Learning

### Notional Learning Hours

| Type of Learning Time | Number of Hours | Expressed as Percentage (%) |
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| Directed self-study | 110 | 73.3 |
| Self-directed learning | 0 | 0 |
| Assessment, review and revision | 40 | 26.7 |
| **Total** | **150** | **100** |

| Teaching and Learning Strategy |
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| Learning is via directed self-study. A guide to studying the module is provided, together with access to a range of study resources, discussion forums and online webinar discussion sessions. Students are strongly encouraged to participate in the module-specific discussions and online webinar discussion sessions to obtain tutor support, and to make use of the LSHTM on-line library resources. Written feedback is provided on submitted assignments.<br><br>Students are directed to use the various online electronic resources and to read and work through the exercises provided. Learning materials include: a brief guide to the module, recorded lectures, computer practicals, online webinar discussions, recommended reading materials, Frequently Asked Questions (FAQs) and suggested relevant websites. |

## Assessment

| **Assessment Strategy** |
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| This module is assessed via one summative assignment worth 30% of the student's mark and a summative time-limited assessment that is worth 70% of the student's mark. |

### Summative assessment

| **Assessment Type** | **Assessment Length** | **Weighting** (%) | **Intended Module Learning Outcomes Tested** |
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| Assessed Assignment | 1500 words<br>Note: details about what to include in the word count and the referencing style to be used are provided in the Assignment Instructions. Students should follow these instructions carefully. | 30 | All |
| Time-limited assessment | TBC | 70 | All |

The summative assignments for this module can be submitted once annually (including resits), no later than **31 March** and must be submitted via the online Assignment Management System.

Time-limited assessments for DL modules are held once a year, usually in June (including resits), and will be held online for 2026-27.

**For students studying UoL awards (initial registration in 2025/2026 and prior years)**
Assessments are held in accordance with University of London's annual guidance.

**For students studying LSHTM awards (registration in 2026/2027 and onwards)**

Assessments are held in accordance with Chapter 8b of the LSHTM Academic Manual.

| **Resitting assessment** |
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| Resits will accord with Chapter 8b of the LSHTM Academic Manual.<br><br>The Resit assessment will be the same assessment type as the first attempt (see previous table). |

## Resources

The following materials are provided to students after registration and fee payment for this module in October:

- A brief guide to studying the module;
- A reading list including details of both required and optional reading and links to selected papers;
- A list of useful websites;
- Access to the LSHTM Virtual Learning Environment (VLE) - Moodle, where students can access a range of materials, including the materials listed above; participate in module-specific discussion forums and online webinar discussion sessions and access the LSHTM online library resources

All materials are provided in e-format and may be accessed via the LSHTM VLE – Moodle.

## Teaching for Disabilities and Learning Differences

The module-specific site on Moodle provides students with access to the majority of the module learning materials, including a study guide and online reading list (detailing both essential and recommended readings), and additional resources including supplementary exercises, the option to listen to recordings of selected lectures taking place in London. In this module, materials provided include a textbook that is made available to students in e-format. All materials posted up on Moodle areas, including computer-based sessions, have been made accessible where possible. The LSHTM Moodle has been made accessible to the widest possible audience, using a VLE that allows for up to 300% zoom, permits navigation via keyboard and use of speech recognition software, and that allows listening through a screen reader. All students have access to "SensusAccess" software which allows conversion of files into alternative formats.

**For students studying University of London awards (initial registration 2025/2026 and prior years:** For students with special needs, reasonable adjustments and support can be arranged – details and how to request support can be found on the University of London Worldwide website at: Inclusive practice and Access arrangements | University of London

**For students studying LSHTM awards (registration 2026/2027 and onwards):** For students who require learning or assessment adjustments and support this can be arranged through the Student Support Services – details and how to request support can be found on the LSHTM Disability Support pages.