UNIVERSITY OF LIVERPOOL

MSc

Planetary and One Health

Study mode	Duration	
Full-time	12 months	Apply by: **28 August 2026** Starts on: **21 September 2026**

About this course

This MSc programme addresses the escalating threats from emerging diseases originating from human-animal interactions, driven by environmental and climate change, global travel and trade, food insecurity, deforestation and biodiversity loss, and other human-caused factors. You'll be part of a new cadre of scientists with interdisciplinary knowledge and skills to help tackle these complex global challenges.

Introduction

Our Planetary and One Health MSc programme will provide lifelong learning, technical and transferable skills, scientific training, and opportunities for employment in rapidly growing fields that address global health, environmental change, disease control, and public health implementation across the medical and veterinary sectors.

You will be taught by internationally renowned infection and health scientists and clinicians in practice, to provide in-depth scientific knowledge and you will receive training for research that can be applied to academic, governmental, non-governmental, commercial, and public health settings.

In addition, you will learn digital, informatic, and mapping skills and the utilisation of open-access climate and environmental data that are of increasing importance for infectious disease research and many employers.

Please note that this programme is suitable for intercalating medical and veterinary students.

Who is this course for?

This masters is for graduates from a biological, environmental science, veterinary, medical or allied health background.

What you'll learn

- Statistical techniques in the design of experiments in biological research
- Evaluating issues associated with emerging infectious disease and global outbreaks
- Understanding of models and data results, and their application to health research
- Investigating complex health problems through a One Health lens, with a multi-disciplinary approach to disease drivers and policy connection
- Practical skills in using mapping / analytical software (i.e. QGIS and R) to analyse the spatial patterns and risk factors associated with human and animal health
- Knowledge and skills for investigating planetary health issues, such as climate change, land use change, biodiversity loss, population movement, and disease spread

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Course content

Discover what you'll learn, what you'll study, and how you'll be taught and assessed.

Semester one

Semester one compulsory modules:

- **Introduction to IVES Research IVES 701**
  This module will prepare students to undertake their MSc research project. Students will work in collaboration with their research project supervisor to devise a plan of work aimed at developing the knowledge and skills that will be required for the MSc research project. Students will create a research development needs report and will determine how to address gaps in practical skills while reflecting on how and where new skills have been obtained. Students will also write a literature review on a topic closely related to their planned research project and record a video summary to explain the research objectives and the topic's significance to a lay audience. By the end of this module, students will be prepared to carry out their MSc research project.
- **Planetary Health IVES 727**
  Planetary Health is defined as "the health of human civilization and the natural systems on which it depends". Consequently, this module will train you in broader skills such as taking a holistic and interrelated approach to health, studying how the health of humans, non-human animals, our climate, and ecology are all linked and affect each other. By recognising this interrelatedness, you will be able to answer more complex and long-term health questions such as: How do climate change and animal movements affect the distribution and interaction between humans, animals and their diseases? And how do land use change and biodiversity loss affect ecology and climate? In short, you will be trained to consider the bigger picture to answer specific health questions. The course concludes with a focus on response and mitigation – specifically, how policymakers need to consider the full range of interconnected facets, and work both locally and globally to address these global challenges. As part of this, you will gain skills in interpreting and evaluating government policy documents.
- **One Health IVES 715**
  This module will introduce students to interdisciplinary approaches to tackling disease from a collaborative One Health perspective. The module will train students in how One Health approaches can be used to address complex

health challenges by considering human-animal-environment interactions. It will equip you with the skillset to develop and evaluate One Health research and policy. Key focus areas within the module include emerging infectious diseases involving animals (i.e. zoonoses) food security and antimicrobial resistance (AMR) as well as examining how the success of One Health disease control programmes can be monitored and evaluated. The principles and techniques will be taught using lectures, seminars with practical opportunities for skills development during the module workshops.Opportunities for active participation will build confidence in the cornerstones of One Health cross-sectoral working including collaboration, co-ordination, communication and capacity building.This course will foster One Health graduates equipped to make an impactful contribution to global citizenship.

- **Biological Data skills LIFE707**
  Data skills are essential for a career in modern biology. Biological studies increasingly involve the generation of large or complex sets of data, and the ability to analyse data is a core component of a successful biologist's skill set. Digital fluency is also required more widely outside biological research and a grounding in data analysis is in demand by a broad range of employers. Here you will learn the ability to visualise data, critically test hypotheses, and to interpret and present results.The module will also introduce students to the powerful open access statistical software package, R.For any students studying off-campus – due to a placement in industry or studying at an overseas University – on-line drop-in sessions will be provided instead of the practical workshops.

Modules listed are subject to approval – the full module structure for this course will be available soon.

Modules

Compulsory modules	Credits
BIOLOGICAL DATA SKILLS (LIFE707)	15
INTRODUCTION TO IVES RESEARCH (IVES701)	30

Programme details and modules listed are illustrative only and subject to change.

Semester two

Semester two compulsory modules:

- **Mapping for Planetary and One Health IVES728**
  This module offers students with a unique opportunity to explore the powerful intersection of geography, human and animal health, climate and environment, and technology. It will equip them with key knowledge, skills, and techniques for investigating and mapping complex spatial variations and interactions. This is critically important and timely, as climate change is projected to influence disease distributions and increase the frequency of outbreaks.Students will gain hands-on experience with geographical information systems (GIS), spatial analytical methods, and the creation of maps that can inform health policies and interventions and help to mitigate the impact of the global threats. No previous knowledge is required, as the module's active-learning approach ensures that students will gain the practical experience working with real-world data, and become able to process and evaluate covered topics.
- **Global Outbreak Surveillance and Control IVES717**
  This is a key module for students with an interest in developing knowledge, skills, and techniques for investigating and controlling global human and animal disease outbreaks. The module is topical and timely, in light of the recent pandemic and will provide students with an opportunity to deal with the different phases and complexities of outbreaks at global, national, and local levels, from the start to finish using a variety of relevant exemplars. The module comprises lectures, seminars, and workshops led by leading academics, and external key stakeholders with expertise in detection, control, surveillance, communication, governance, policy, bioinformatics, economic and community engagement applications, all integral to the investigation of, and control of outbreaks. The module uses active-learning delivery methods to ensure students can process and evaluate the topics, and has three assessments aimed at developing knowledge and skills in infographics, verbal communication and written reports.
- **Understanding Models and Data IVES724**
  In recent years, data and statistics have become a feature of emerging public health situations to an extent that is historically unprecedented. Scientists, policy makers and the public have had to become confident consumers of numbers and model predictions. The actors involved in the management of infectious diseases are not necessarily modelling specialists themselves, but nevertheless need to interpret statistical and modelling results and be aware of their limitations.This module will train students to understand what can and cannot be learnt from data and modelling results. The module does not assume that students are experts in statistics or modelling. Students will receive training in how to use simple visualisations and analysis to gain a robust understanding of key patterns in data, and how to recognise common

pitfalls in data interpretation. Students will learn the distinction between different approaches in statistics and quantitative modelling, and when it is appropriate to use them. Particular attention will be paid to the management of uncertainty in model predictions. The module will equip students to interpret critically the quantitative results in scientific papers and reports, and how to use them to inform the management of infectious diseases.

Modules listed are subject to approval – the full module structure for this course will be available soon.

Modules

Compulsory modules	Credits
UNDERSTANDING MODELS AND DATA (IVES724)	15

Programme details and modules listed are illustrative only and subject to change.

Final project

IVES Research Project IVES702

This module offers students the exciting opportunity to conduct an independent research project related to their chosen area of study under academic guidance. It is designed to develop key skills and aims to foster independence in students and support them in developing their organisation, critical thinking and analytical skills, consideration of impact, as well their communication and academic writing skills.

Students will create a project plan of their proposed work at the start of the project, and will present their work orally to their peers, as well as producing a final scientific project report in the style of a research paper. Students will also be assessed on their approach to their laboratory, field or computer-based work during the project.

Modules listed are subject to approval – the full module structure for this course will be available soon.

Modules

Compulsory modules	Credits
IVES RESEARCH PROJECT (IVES702)	60

Programme details and modules listed are illustrative only and subject to change.

Teaching and assessment

How you'll learn

You will experience a range of teaching and learning methods, including lectures, seminars, workshops, group discussion and e-learning.

Programme modules encourage individual and group work where you will tackle problems by developing ideas and hypotheses, design learning strategies to solve problems, and then analyse and interpret your findings.

Course material is available 24-hours a day on Canvas, our online learning platform. One-to-one meetings with your research supervisor will allow you to discuss science, develop your critical thinking and creativity through an ongoing feedback model.

Your master research project provides a full academic research experience, including the planning, execution and communication of scientific research.

How you're assessed

Assessment of knowledge and understanding, practical skills and transferrable skills is through a blended mix of coursework that may include practical and project reports, essays, completion of workbooks, talks, data handling sessions and posters.

All modules will provide you with feedback on your learning progress and allow for adjustment of your learning. Electronic resources available on the University virtual learning environment support learning and teaching.

Liverpool Hallmarks

We have a distinctive approach to education, the Liverpool Curriculum Framework, which focuses on research-connected teaching, active learning, and

authentic assessment to ensure our students graduate as digitally fluent and confident global citizens.

The Liverpool Curriculum framework sets out our distinctive approach to education. Our teaching staff support our students to develop academic knowledge, skills, and understanding alongside our **graduate attributes**:

- Digital fluency
- Confidence
- Global citizenship

Our curriculum is characterised by the three **Liverpool Hallmarks**:

- Research-connected teaching
- Active learning
- Authentic assessment

All this is underpinned by our core value of **inclusivity** and commitment to providing a curriculum that is accessible to all students.

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Careers and employability

Graduates equipped with interdisciplinary skills and expertise in this topic will be able to transition to a range of diverse career options, including public health, epidemiology, health policy and advocacy, environmental science, teaching, and consultancy.

Graduates will be highly competitive candidates for positions in academia (research assistants), government agencies (e.g., UK Health Security Agency; Department for Environment, Food and Rural Affairs), international organizations (e.g., World Health Organization, UN Environment Programme), non-governmental organizations/charities (World Wildlife Fund for Nature), climate research centres, environmental consultancy firms, and companies focused on global health and environmental change.

The MSc Planetary and One Health prepares you for a diversity of job opportunities in the public and private sector. Potential career pathways include, but are not limited to, the roles of:

- PhD training in academia and/or industry
- Teaching in secondary/higher education
- Scientist employed by public sector agencies, non-government organisations or charities
- Scientist employed in private sector organisations with a focus on bioscience, environment, and public and veterinary health

Career support from day one to graduation and beyond

Career planning

From education to employment

Networking events

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Fees and funding

Your tuition fees, funding your studies, and other costs to consider.

Tuition fees

UK fees (applies to Channel Islands, Isle of Man and Republic of Ireland)

Full-time place, per year - £13,300

International fees

Full-time place, per year - £28,300

Fees stated are for the 2025/26 academic year. Tuition fees for the academic year 2026/27 will be announced soon.

Tuition fees cover the cost of your teaching and assessment, operating facilities such as libraries, IT equipment, and access to academic and personal support.

- You can pay your tuition fees in instalments.
- All or part of your tuition fees can be funded by external sponsorship.
- International applicants who accept an offer of a place will need to pay a tuition fee deposit.

If you're a UK national, or have settled status in the UK, you may be eligible to apply for a Postgraduate Loan worth up to £12,167 to help with course fees and living costs. **Learn more about paying for your studies**.

Additional costs

We understand that budgeting for your time at university is important, and we want to make sure you understand any course-related costs that are not covered by your tuition fee. This could include buying a laptop, books, or stationery.

Find out more about the additional study costs that may apply to this course.

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Entry requirements

The qualifications and exam results you'll need to apply for this course.

Postgraduate entry requirements

This degree can be in any subject discipline. This degree should be in a Biological or Environmental Sciences subject or equivalent.

Applicants with a previous clinical degree (Veterinary Science or Medicine (MBChB)(or allied health subject (e.g. Dentistry or Nursing) from a UK University will be considered.

International qualifications

Select your country or region to view specific entry requirements.

Many countries have a different education system to that of the UK, meaning your qualifications may not meet our entry requirements. Completing your Foundation Certificate, such as that offered by the University of Liverpool International College, means you're guaranteed a place on your chosen course.

English language requirements

You'll need to demonstrate competence in the use of English language, unless you're from a majority English speaking country.

We accept a variety of international language tests and country-specific qualifications.

International applicants who do not meet the minimum required standard of English language can complete one of our Pre-Sessional English courses to achieve the required level.

IELTS

6.5 overall, with no component below 6.0

TOEFL iBT

88 overall, with minimum scores of listening 19, writing 19, reading 19 and speaking 20. TOEFL Home Edition not accepted.

Duolingo English Test

125 overall, with writing not less than 125, speaking and reading not less than 115, and listening not below 110. For academic year 2025/26 only, we will also accept the production, literacy, comprehension and conversation score set: 120 overall, with no component below 105.

INDIA Standard XII

National Curriculum (CBSE/ISC) - 75% and above in English. Accepted State Boards - 80% and above in English.

WAEC

C6 or above

Pre-sessional English

Do you need to complete a Pre-sessional English course to meet the English language requirements for this course?

The length of Pre-sessional English course you'll need to take depends on your current level of English language ability.

Pre-sessional English in detail

If you don't meet our English language requirements, we can use your most recent IELTS score, or the equivalent score in selected other English language tests, to determine the length of Pre-sessional English course you require.

Use the table below to check the course length you're likely to require for your current English language ability and see whether the course is available on campus or online.

Your most recent IELTS score	Pre-sessional English course length	On campus or online
6.0 overall, with no component below 6.0	6 weeks	On campus
6.0 overall, with no component below 5.5	10 weeks	On campus and online options available
6.0 overall, with no more than one component below 5.5, and no component below 5.0	12 weeks	On campus and online options available
5.5 overall, with no more than one component below 5.5, and no component below 5.0	20 weeks	On campus
5.0 overall, with no more than one component below 5.0, and no component below 4.5	30 weeks	On campus
4.5 overall, with no more than one component below 4.5, and no component below 4.0	40 weeks	On campus

If you've completed an alternative English language test to IELTS, we may be able to use this to assess your English language ability and determine the Pre-sessional English course length you require.

Please see our guide to Pre-sessional English entry requirements for IELTS 6.5 overall, with no component below 6.0, for further details.

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