



MSc

Emerging Infections and Pandemics

Study mode

Full-time

Duration

12 months

Apply by: **29 August 2025**

Starts on: **22 September 2025**

About this course

The COVID-19 pandemic has highlighted the major challenges of controlling the spread of infectious disease in a highly interconnected world. This has had a massive impact on public health, the economy, social interaction and the way we work. While the pandemic revealed a lack of preparedness in many parts of the world, it was not the first and it will not be the last. Therefore, we need to develop a workforce that is able to respond to future pandemics.

Introduction

You will be provided with a breadth of interdisciplinary expertise and practical role-play in the epidemiology, immunology, control and management of epidemics and pandemics in a One Health (integrated medical and veterinary) context led by leading experts in their respective fields.

With a core syllabus in Infection & Immunity, the Emerging Infections and Pandemics MSc takes you from the laboratory bench into the highly topical field of mathematical modelling to understand how pandemics spread and how to slow them down. You will also work through an Outbreak Scenario across two semesters, where you will come to understand the critical role of policy, communication and the media in the success (or otherwise) of translating scientific knowledge into effective disease control.

This programme will enable you to further develop your skills in communications and statistics beyond undergraduate level and will train you to critically evaluate and

synthesise aspects of infectious diseases and immunology with practical applications in public health and outbreak control.

The Liverpool City Region played a critical role in the Covid-19 pandemic by rolling-out the first mass asymptomatic testing programme worldwide and was selected as a key location of the Events Research Programme, which determined that large social gatherings could be held safely using testing or confirmation of vaccination status.

The University of Liverpool is a major partner in Liverpool's new [Pandemic Institute](#) and our academics include several experts who advised Government during the Covid-19 pandemic, as well as scientists working on new Covid treatments and improved understanding of Long Covid.

Please note that this course may soon be available for part-time study.

Who is this course for?

This master's is for graduates from a Biomedical Sciences background who want to develop understanding and skills in statistical analyses, infection biology and disease surveillance, with the interdisciplinary expertise required to prevent, monitor and control medical and veterinary infectious disease outbreaks.

What you'll learn

- Statistical techniques in the design of experiments in biological research
- Core skills in critically evaluating issues associated with emerging infectious disease and pandemics
- Knowledge, skills, and techniques for investigating and controlling global human and animal disease outbreaks
- Critically evaluation of key concepts, technologies and multifactorial considerations circumscribing diagnostics, therapeutics and vaccines
- Understanding of models and data results

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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

Modules

Compulsory modules	Credits
<u>INTRODUCTION TO RESEARCH (LIFE702)</u>	30
<u>BIOLOGICAL DATA SKILLS (LIFE707)</u>	15
<u>EMERGING INFECTIONS AND PANDEMICS (LIFE751)</u>	15
<u>GLOBAL OUTBREAK SURVEILLANCE AND CONTROL (LIFE758)</u>	30

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

Semester two

Modules

Compulsory modules	Credits
<u>INTRODUCTION TO RESEARCH (LIFE702)</u>	30
<u>DIAGNOSTICS, THERAPEUTICS AND VACCINES (LIFE732)</u>	15
<u>UNDERSTANDING MODELS AND DATA (LIFE762)</u>	15

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

Final project

Modules

Compulsory modules	Credits
<u>MSC RESEARCH PROJECT (LIFE703)</u>	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 in this subject area are highly sought after. You will be equipped for a range of career opportunities in pandemic response – and future disease control and public health implementation – across the medical and veterinary sectors in academia and industry, as well as in government departments, international charities and non-governmental organisations.

There is high demand for individuals with interdisciplinary skills in immunology, modelling, statistics, epidemiology, and public health policy is expected among STEM graduates.

Commercial sectors such as the pharmaceutical, biotechnology and agriculture industries are also employers of our graduates, especially with the increase of next-generation sequencing and the corresponding data analysis that is required.

The MSc Emerging Infections and Pandemics 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, NGOs or charities
- Scientist employed in private sector organisations with a focus on infection control, therapeutics and vaccines.

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 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

We accept a 2:2 honours degree from a UK university, or an equivalent academic qualification from a similar non-UK institution. This degree should be in a Biological Sciences subject or equivalent. Candidates must have a scientific background acceptable to the Programme Director.

International qualifications

Select your country or region to view specific entry requirements.

If you hold a bachelor's degree or equivalent, but don't meet our entry requirements, a Pre-Master's can help you gain a place. This specialist preparation course for postgraduate study is offered on campus at the [**University of Liverpool International College**](#), in partnership with Kaplan International Pathways. Although there's no direct Pre-Master's route to this MSc, completing a Pre-Master's pathway can guarantee you a place on many other postgraduate courses at The University of Liverpool.

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

Pearson PTE Academic

61 overall, with no component below 59

LanguageCert Academic

70 overall, with no skill below 65

PSI Skills for English

B2 Pass with Merit in all bands

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	40 weeks	On campus

Your most recent IELTS score

**Pre-sessional
English course
length**

**On campus or
online**

component below 4.0

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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