UNIVERSITY OF LIVERPOOL

MRes

Infection, Microbiology and Microbiomes

Study mode	Duration	
Full-time	12 months	Apply by: **29 August 2025** Starts on: **22 September 2025**

About this course

Develop research expertise and cutting-edge skills to address global challenges including infectious diseases, AMR, and the rapidly evolving field of microbiomes, which is crucial for human, animal, and environmental health within the Institute of Infection, Veterinary and Ecological Sciences.

Introduction

Equip yourself for a range of careers in academia, biotechnology, healthcare, and public health. Leverage Liverpool's strength in One Health to play a pivotal role in shaping solutions for the future of global health and beyond.

This programme offers a unique opportunity to gain expertise to address and communicate complex global issues. Explore infection, microbiology and the role of microbiomes in health, disease and the environment. Benefit from world-class facilities, expert supervision, and a vibrant scientific community.

The programme includes Research Foundations, a 90-credit research project and specialized modules (60 credits). Choose a research project that aligns with your interests and collaborate with internationally recognized scientists, gaining hands-on experience with access to the Centre for Genomic Research (CGR) and the NERC Environmental Omics Facility (NEOF) and join the Microbiome Innovation Centre (MIC) and its active community of researchers.

Specialized modules can complement your research, allowing you to dive deeper into a range of topics and develop interdisciplinary skills in high demand across sectors. Graduates will be well-positioned to pursue competitive careers in biomedical and

biological research, in academia, public sector agencies and leading pharmaceutical/biotech companies.

Who is this course for?

This master's in research is for graduates from a Biomedical Sciences, Biological Sciences or Bioveterinary Sciences background who want to develop understanding and research skills across the fields of infection and disease, microbiology in health and the environment, microbiomes and their interplay from a One Health perspective. This MRes will equip students with the knowledge, experience and transferable skills necessary for them to transition to and be competitive in a number of careers. Individuals with interdisciplinary skills in infection, health and environmental microbiology, phage biology, bioinformatics and microbiomes, translation, communication and application of such research for societal good are in demand.

What you'll learn

- Develop core skills in study design, research ethics and governance, and develop a research funding proposal
- Develop communication strategies to engage different audiences in your research and gain practical experience in translating complex scientific ideas to non-expert audiences
- Develop core principles of microbial diversity, community assembly and interactions, and microbiome function from a One Health perspective
- Develop skills in critically evaluating issues associated with emerging infectious disease and pandemics
- Develop skills in critically evaluating design and implementation of diagnostics, therapeutics and vaccines
- Theoretical and technical knowledge in sequence analysis, phylogenetics, and the modelling of proteins, and others
- Coding skills to perform tasks in the biological sciences
- Develop principal skills in presenting immunological interactions and responses
- Knowledge, skills, and techniques for investigating and controlling global human and animal disease outbreaks
- Develop understanding of models and data results

Back to top

Course content

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

Semester one

Compulsory:

- Research Foundations (IVES703)
- Microbiomes (IVES729)

Modules

Optional modules	Credits
INFORMATICS FOR LIFE SCIENCES (LIFE721)	15
CODING FOR LIFE SCIENCES (LIFE733)	15
EMERGING INFECTIONS AND PANDEMICS (IVES711)	15

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

Semester two

Compulsory: IVES MRes Research Project (IVES704)

Modules

Optional modules	Credits
IMMUNOLOGY (IVES721)	15

Optional modules	Credits
DIAGNOSTICS, THERAPEUTICS AND VACCINES (IVES722)	15
UNDERSTANDING MODELS AND DATA (IVES724)	15
GLOBAL OUTBREAK SURVEILLANCE AND CONTROL (IVES717)	15

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

Final project

Compulsory: IVES MRes Research Project (IVES704)

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

Teaching and assessment

How you'll learn

Throughout this on campus programme, you will engage in a diverse range of teaching and learning methods designed to foster both individual and collaborative learning. Time-tabled teaching activities will include lectures, seminars, interactive workshops, group discussions, and case-based learning. The modules are structured to encourage active participation, enabling you to develop ideas, formulate hypotheses, and design strategies to address complex problems.

You will work both individually and in groups, tackling real-world challenges by applying critical thinking and problem-solving techniques. As part of your development, you will co-create a research proposal and engage in public outreach activities, with the opportunity to implement these.

Learning is supported by a range of resources available 24/7 on Canvas, our online learning platform, ensuring you have constant access to course materials. Additionally, you will have regular one-on-one meetings with your research supervisor, providing tailored support and ongoing feedback. These sessions will

help refine your critical thinking, creativity, and scientific communication skills in a collaborative and supportive environment.

Your research project will be the cornerstone of the programme, offering you a comprehensive academic research experience. From planning and identifying training needs to executing and communicating your research findings, this project will provide hands-on experience in scientific inquiry. You will gain invaluable skills in research methodology, data analysis, and scientific writing, while also having the opportunity to present your findings to peers and professionals.

How you're assessed

The assessments within this programme aim to simulate real world challenges, reflecting tasks students will encounter within their professional careers. Students are assessed through a blended mix of coursework that includes scientific reports, conference presentations, developing public engagement resources, research grant proposals, data handling sessions and poster presentations, culminating in a research project report in the style of an academic paper which will include a visual abstract and an oral viva at the end of semester 3.

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.

Back to top

Careers and employability

Graduates of the MRes in Infection, Microbiology, and Microbiomes will gain cutting-edge research expertise and specialized knowledge, unlocking exciting career opportunities. Beyond PhD training in academia or industry, you'll be primed to become a sought-after candidate for roles in public sector agencies like the UK Health Security Agency, Animal and Plant Health Agency, and National Institute for Health Research, as well as non-governmental organizations and leading pharmaceutical and biotech companies.

Whether you're pioneering groundbreaking scientific discoveries or shaping global health policy, this programme provides a solid foundation to propel you into a career dedicated to tackling the world's most pressing global challenges.

Career support from day one to graduation and beyond

Career planning

From education to employment

Networking events

Back to top

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 - £5,006

International fees

Full-time place, per year - £31,250

Fees stated are for the academic year 2025/26. Research support fees: £3000 for a laboratory-based research projects and £1000 for computational-based research projects.

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.

Back to top

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 relevant subject, such as Microbiology, Biological Sciences or Biomedical Sciences.

Third or fourth year intercalating medical, veterinary or dental students who have passed all assessed components of their programme to date equivalent to a 2:2 will be considered for the programme. A maximum of 10 intercalating student places will be available.

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

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	20 weeks	On campus

Your most recent IELTS score	Pre-sessional English course length	On campus or online
component below 5.0		
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.

Back to top