UNIVERSITY OF LIVERPOOL

MSc

Biotechnology

Study mode	Duration
Full-time	12 months
Part-time	24 months

Apply by: **28 August 2026**
Starts on: **21 September 2026**

About this course

Biosciences and technology are an integral part of the global economy. Our Biotechnology MSc has been designed with input from major industry players to ensure that current skill gaps and emerging skill needs are being addressed.

What you'll learn

- Modern biotechnology and bioimaging tools and approaches
- Statistical techniques in the design of experiments in biological research
- Theoretical and technical knowledge in sequence analysis, phylogenetics, and the modelling of proteins, and others
- The understanding of the grand challenges in biotechnological applications
- Key aspects of computational biology
- The understanding of proteomic and metabolomic techniques and related data analysis

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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

LIFE702 Introduction to Research

Level: M
Credit Level: 30
Semester: Whole session

This module will prepare students for their MSc research project. Students will work under the guidance of their research project supervisor to acquire the knowledge and skills they will need for their MSc research project. Students will work in collaboration with their supervisor to identify skills and knowledge essential for their MSc research project and to devise a plan of work to address these. Students are expected to work independently through their plan of work, with guidance provided by their supervisor at regular meetings. Students will create a reflective portfolio of work which will highlight how and where the skills have been developed. Students will perform a literature search and write a literature review based on their project area, as well as write a grant proposal. Upon completion of this module, students will progress on to their MSc research project module.

Modules

Compulsory modules	Credits
BIOLOGICAL DATA SKILLS (LIFE707)	15
INFORMATICS FOR LIFE SCIENCES (LIFE721)	15
CELLULAR BIOTECHNOLOGY AND BIOLOGICAL IMAGING (LIFE749)	15

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

Semester two

In semester two, you will undertake **two** compulsory modules. You will also undertake **one** optional module; choose from LIFE752 or BIOS776.

Modules

Compulsory modules	Credits
PROTEOMICS METABOLOMICS AND DATA ANALYSIS (LIFE754)	15
SYNTHETIC BIOLOGY AND BIOTECHNOLOGY (LIFE756)	15

Optional modules	Credits
COMPUTATIONAL BIOLOGY (LIFE752)	15
GLOBAL PERSPECTIVES (BIOS776)	15

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

Final project

During the summer you will undertake your MSc project, for submission in September.

Modules

Compulsory modules	Credits
MSC RESEARCH PROJECT (LIFE703)	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 with an MSc in Biotechnology are well equipped to enter a wide range of employment options.

The programme provides you with the necessary knowledge and skills to become a professional scientist in your chosen area of biotechnology. It has been specifically designed to enhance students' careers in different biotechnology sectors in a variety of research, product and technology development, and leadership roles.

Furthermore, upon successful completion of the MSc you may wish to continue with your education by studying for a PhD.

In the public sector, graduates from this programme are in demand in research institutes, government departments, the Health Service, forensic science and the Environment Agency. There is also demand currently for graduates with specialisations in science or computing to enter the teaching profession.

The MSc Biotechnology 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:

- Research Scientist
- Biomedical Engineer
- Consultant
- Biological/Clinical Technician
- Biomanufacturing Specialist.

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
Part-time place, per year - £6,650

International fees

Full-time place, per year - £28,300
Part-time place, per year - £14,150

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

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. 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.

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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