UNIVERSITY OF LIVERPOOL

MSc

Precision Medicine

Study mode	Duration	
Full-time	12 months	Apply by: **17 September 2027**
Part-time	24 months	Starts on: **27 September 2027**

About this course

Utilising the world leading expertise of University of Liverpool academics in the field, the MSc Precision Medicine programme aims to give students a broad understanding of concepts and research around how modern medicine and drug development is utilising a more personalised approach to improve the effectiveness and safety of medicines.

Introduction

The programme's mission is centred around improving patient treatment through the optimisation, of current treatments, understanding variability in patient responses from both an efficacy and safety perspective, and formulation of advanced personalised therapeutics, such as gene and cellular therapies.

The programme is led by internationally recognised clinical and non-clinical experts in the field of pharmacology, toxicology, and precision medicine based in the world-renowned Wolfson centre for Personalised Medicine at the University of Liverpool. In addition, teaching will be delivered by experts in the field from the biotechnology and pharma industry.

At the heart of the programme are modules centred around key topics in the field of pharmacology and personalised medicine. Advances in Personalised Healthcare will provide students with learning opportunities in understanding the principle of pharmacogenomics as well as other examples of personalised or stratified healthcare in both clinical and drug development settings. Linked to this is the Experimental Medicine and Clinical Pharmacology module, where students will learn how clinical trials are conducted, and how risk assessment needs to be managed in early phase trials, particularly for these new therapeutic modalities.

Who is this course for?

This programme is suitable for biomedical, biological and clinical sciences graduates but also those in industry or healthcare professions

What you'll learn

Students on this programme will learn:

- How precision medicine principles are applied to modern healthcare.
- How advance bio-analysis methodologies can used and applied in a personalised medicine setting.
- How large clinical datasets can be analysed and used to advance our understanding of an individual’s response to treatment.
- How personalised drug treatments are revolutionising the way we treat range of conditions.

Back to top

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
INTRODUCTION TO DATA SCIENCE AND AI FOR HEALTH INNOVATION (DASC501)	15
BIOLOGICAL DATA SKILLS (LIFE707)	15
ADVANCES IN PERSONALISED HEALTHCARE (BIOS767)	15
INTRODUCTION TO RESEARCH (LIFE702)	30

Programme details and modules listed are illustrative only and subject to change. As part of our commitment to continuous improvement, we are currently reviewing all of our programmes. This may include refining study pathways, strengthening links with employers, integrating generative AI, developing students' research skills, and enhancing alignment with our research strengths. The course content currently shown on this page reflects the programme as it ran for students beginning in September 2026. This page will be updated for students beginning in September 2027 by Friday 30th April 2027 at the latest.

Semester two

Modules

Compulsory modules	Credits
EXPERIMENTAL MEDICINE AND CLINICAL PHARMACOLOGY (LIFE764)	15
STATISTICAL GENETICS AND PHARMACOGENOMICS (DASC508)	15
INTRODUCTION TO RESEARCH (LIFE702)	30

Optional modules	Credits
COMPUTATIONAL BIOLOGY (LIFE752)	15
PROTEOMICS METABOLOMICS AND DATA ANALYSIS (LIFE754)	15
DIAGNOSTICS, THERAPEUTICS AND VACCINES (IVES722)	15

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Final Project

Modules

Compulsory modules	Credits
MSC RESEARCH PROJECT (LIFE703)	60

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Teaching and assessment

How you'll learn

You will experience a range of teaching and learning methods, including lectures, seminars, workshops, data-handling and computation skills development and e-learning.

The taught components of the course are delivered by experts in their respective fields and are closely aligned to research within the Department of Pharmacology and Therapeutics, ensuring that all teaching is research-led.

Additionally, through the final research project, you will apply the knowledge and skills you have learned in the program by working within the laboratories of these research teams, at the cutting edge of R&D in Precision Medicine. This is particularly suited for those wishing to go onto a research career, supported by PhD 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 Learning Framework

At Liverpool, we take a distinctive approach to education through the Liverpool Learning Framework. This means teaching that is engaging, inclusive and designed to help you succeed during your studies and beyond.

You'll develop specialist subject knowledge alongside the skills employers value most, including:

- Digital fluency
- Confidence
- Global citizenship

Our curriculum is characterised by the three Liverpool Hallmarks:

- Research-connected teaching - learning informed by the latest ideas and discoveries
- Active learning - taking part, applying knowledge and learning by doing
- Authentic assessment - assessments designed around real-world tasks and challenges

We also embed key priorities across our curriculum, including AI literacy, employability, and sustainability, helping you prepare for the future and make a positive impact in the world.

We're committed to creating a supportive and inclusive learning environment where every student can thrive.

Back to top

Careers and employability

Precision medicine is a rapidly expanding field with a multitude of job opportunities. The programme will provide a range of skills and expertise which equip graduates for careers in healthcare, industry and academia.

Graduates from this programme will obtain skills and knowledge required to enter a wide range of careers including

- Laboratory scientist in healthcare, academic or industry settings.
- Health data analyst.
- Clinical trials management.

In addition, opportunities to study for a higher degrees (PhD) in a range of clinical and biomedical subjects are also open.

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 - £14,000
Part-time place, per year - £7,000

International fees

Full-time place, per year - £32,000
Part-time place, per year - £16,000

Tuition fees are for the academic year 2026/27.

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 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 £13,206 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. You can find information on the general and subject-specific costs you could expect to incur on our study costs webpage.

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 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

If you took a TOEFL test on or before 20 January 2026, you'll need 88 overall, with minimum scores of listening 19, writing 19, reading 19 and speaking 20. If you took a TOEFL test from 21 January 2026 onwards, when a new scoring system was introduced, you'll need 4.5 overall, with 4 or above in all components. 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 writing at 6.0 and no component below 5.5	6 weeks	On campus or online
5.5 overall, with writing at 5.5 and no component below 5.0	10 weeks	On campus or online
5.5 overall, with no more than one component at 5.0	12 weeks	Online
5.5 overall, with no component below 5.0	20 weeks	On campus
5.0 overall, with no more than one component at 4.5	30 weeks	On campus
4.5 overall, with no more than one component at 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

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