UNIVERSITY OF LIVERPOOL

MSc

Data Science for Health (Conversion)

Study mode	Duration	
Full-time	12 months	Apply by: **11 September 2026** Starts on: **28 September 2026**

About this course

You don't need a background in data science to excel in our Data Science for Health MSc. Designed as a conversion course, this programme equips graduates from diverse fields with the technical and analytical skills needed to thrive in this rapidly growing sector. Data science is transforming healthcare—enabling early disease prediction through machine learning and enhancing medical imaging with AI for faster, more accurate diagnoses. Whether you're looking to pivot your career or enter the world of health data, this programme will prepare you to be a key player in the digital revolution of healthcare.

Introduction

This MSc is designed as a conversion course, welcoming students from diverse academic and professional backgrounds. You don’t need prior experience in data science—our supportive learning environment ensures that all students develop the statistical, technical computing skills and confidence needed to succeed.

Data science is transforming the healthcare sector, where vast amounts of health data has the potential to revolutionise healthcare interventions. With the rise of electronic health records, wearable technology, and AI-driven diagnostics, healthcare now generates more data than ever before. Effectively analysing this data allows for earlier disease detection, personalised treatment plans, and more efficient resource allocation. The programme blends core principles of computer science with advanced statistical analysis and data visualisation techniques, demonstrating how health data science can enhance our understanding of disease and healthcare.

Predictive analytics can help identify at-risk populations, while machine learning models assist in diagnosing conditions with greater accuracy. In today's world, where crises such as geopolitical fragmentation, emerging zoonotic diseases, escalating conflicts, and widespread inequality are taking centre stage, data science plays a crucial role in public health by tracking disease outbreaks, guiding policy decisions, and improving global health interventions.

The MSc structure is highly flexible, allowing students to follow their personal interests and specialise in areas such as prediction modelling, artificial intelligence and machine learning, and personalised medicine. Throughout the programme, students benefit from expert guidance, hands-on learning, and a collaborative environment designed to help them thrive.

This MSc also has strong links to the Civic Health Innovation Labs (CHIL), an internationally recognised, multi- and trans-disciplinary research centre based at the University of Liverpool. CHIL brings together leading experts from academia, the NHS, local government, charities, and industry to develop responsible AI and innovative data solutions for health and society. Students have the opportunity to engage in research projects focused on healthcare data analytics, digital health solutions, public health informatics, and the application of technology in community health initiatives.

Who is this course for?

This master's programme is suitable for you if you hold a 2.2 degree from a UK university (or equivalent). Your first degree could be in any subject as this programme will train you in basic statistical and computing skills.

For overseas students, an acceptable English language qualification is required of IELTS 6.5 or equivalent with no individual band less than 6.0.

For students who have previous experience or quantitative training (for example a first degree in computer science or mathematics), please see our Data Science and Analytics for Health MSc.

For students who have a particular interest in undertaking research, we also have a Data Science for Health MRes. This programme is designed for students who prefer more intensive research training, with a major independent research project at its core, making it ideal for those considering future PhD study, academic careers, or those wanting to specialise in a specific research topic.

What you'll learn

- The importance of data science to healthcare
- The role of a health data scientist as a member of a healthcare team
- In-depth knowledge and a systematic understanding of the ethical, legal, and regulatory frameworks that impact on the conduct of health data science
- A broad base of knowledge, equipping them with the ability to apply statistical and machine learning approaches to analyse health-related data and critically evaluate the findings
- Professional skills including team science communication skills which will enable students to work as a successful data scientist in the public or private sector
- The opportunity to obtain specialised knowledge along a statistics track, computer science track, or a combination.

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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
INTRODUCTION TO HEALTH DATA SCIENCE (DASC501)	15
STATISTICS FOR HEALTH RESEARCH (DASC502)	15
COMPUTER PROGRAMMING FOR HEALTH RESEARCH (DASC509)	15

Optional modules	Credits
USING ROUTINE DATA FOR PUBLIC HEALTH (DASC503)	15
AN INTRODUCTION TO QUALITATIVE RESEARCH (PUBH160)	15
ARTIFICIAL INTELLIGENCE AND MACHINE LEARNING FOR HEALTH (DASC512)	15

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

Semester two

Modules

Optional modules	Credits
EVALUATION OF HEALTHCARE INTERVENTIONS (DASC504)	15
PREDICTION MODELLING & JOINT LONGITUDINAL AND SURVIVAL DATA ANALYSIS (DASC506)	15
HIGH-DIMENSIONAL DATA STRUCTURES AND LEARNING ALGORITHMS (DASC507)	15
STATISTICAL GENETICS AND PHARMACOGENOMICS (DASC508)	15
DATA MINING AND VISUALISATION (COMP527)	15
MACHINE LEARNING AND BIOINSPIRED OPTIMISATION (COMP532)	15
COMPUTATIONAL INTELLIGENCE (COMP575)	15
ACTIONABLE HEALTHCARE DATA ANALYTICS (DASC505)	15

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

Dissertation

Modules

Compulsory modules	Credits
DISSERTATION (DASC500)	60

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

Teaching and assessment

How you'll learn

The learning and teaching strategy for the programme comprises a mixture of formal lectures, practical and tutorial sessions, discussion groups, student centred learning, and project work. Additional support is sought from online materials, selected textbooks and directed reading of research literature (taken from scientific journals and conference proceedings). Each module (except the dissertation) is worth 15 credits and thus totals approximately 150 hours, 25-50 of which are in taught sessions.

How you're assessed

Semester 1

Module	Assessment 1	Assessment 2
DASC501	Written article appraisal (1500 words, 70%)	Plain language summary (600 words, 30%)
DASC502	Written data analysis (1500 words, 70%)	Poster presentation (30%)
DASC503	Written report (1500 words, 70%)	Poster + pre-recorded 5 mins oral presentation (30%)
DASC509	Written data analysis (1500 words, 50%)	Written data analysis (1000 words, 50%)

Semester 2

Module	Assessment 1	Assessment 2
DASC504	Critical appraisal (3500 words, 60%)	Written statistical analysis plan (1500 words, 40%)
DASC505	Written report (1500 words, 70%)	Oral presentation (video) (15 mins, 30%)
DASC506	Written analysis plan (1000 words, 50%)	Written data analysis (2500 words, 50%)
DASC507	Written data analysis (3000 words, 80%)	Oral presentation (15 mins, 20%)
DASC508	Quality control assessment (800 words, 25%)	Written data analysis (2500 words, 75%)
COMP575	Written exam (100%)	
COMP527	Coursework (15%) Coursework (15%)	Written exam (70%)
COMP532	Coursework (15%) Coursework (15%)	Written exam (70%)

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 data science are in high demand worldwide. Whether you aspire to work as a data scientist in the NHS, develop AI-driven healthcare solutions or contribute to groundbreaking medical research, this programme provides the tools to help you succeed. With the demand for data scientists and data engineers at an all time high, it's envisaged that there's a need for approximately 52,000 new data science jobs in the UK alone.

The healthcare sector is the fast growing employment sector around the world. This programme opens up a multitude of career opportunities for professionals with strong quantitative skills to evaluate health care interventions and information systems. Graduates are perfectly placed to enter roles in hospitals, government agencies, pharmaceutical companies or health tech start ups driving innovation and improving patient outcomes worldwide.

Graduates from the MSc in Data Science for Health are likely to enter a variety of careers opportunities. These include:

- PhD student
- Research Assistant
- Trial statistician
- Epidemiologist
- Data Scientist.

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 - £14,000

International fees

Full-time place, per year - £32,000

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 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 master's programme is suitable for you if you hold a 2.2 degree from a UK university (or equivalent). Your first degree could be in any subject as this programme will train you in basic statistical and computing skills.

For overseas students an acceptable English Language qualification is required of IELTS 6.5 or equivalent, with no individual band less than 6.0.

If you have previous experience or quantitative training (for example a first degree in computer science or mathematics), please see our MSc Data Science and Analytics for Health MSc.

For students who have a particular interest in undertaking research, we also have our Data Science for Health MRes. This programme is designed for students who prefer more intensive research training, with a major independent research project at its core, making it ideal for those considering future PhD study, academic careers, or those wanting to specialise in a specific research topic.

International qualifications

Select your country or region to view specific entry requirements.

Applicants with any academic background will be considered, as students will be trained on basic statistical and computing skills. As such, there is no minimum entry requirement for this programme, but an acceptable English language qualification (IELTS 6.5 or equivalent, with no band less than 6.0) is required to ensure students can access the programme material which is all delivered in English.

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

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.

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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