UNIVERSITY OF LIVERPOOL

MRes

Data Science for Health

Study mode	Duration	
Study mode	**Duration**	Apply by: **28 August 2026**
Full-time	12 months	Starts on: **21 September 2026**
Part-time	24 months	

About this course

Data science is transforming healthcare, where vast amounts of health data has the potential to revolutionise healthcare interventions. Gain cutting-edge research skills in this interdisciplinary area and delve into a year long research project tackling global health challenges. This programme will prepare you to be a key player in the digital revolution of healthcare.

Introduction

This MRes is the ideal choice for those looking to drive innovation in healthcare through advanced research. With the increasing availability of complex health data—from electronic health records to AI-driven diagnostics—there is a growing need for experts who can harness this information to improve patient outcomes and public health. This programme provides a unique opportunity to develop specialist skills in machine learning, predictive analytics, and data visualisation while conducting an extended research project that tackles real-world healthcare challenges. Whether you aim to pursue a PhD, contribute to cutting-edge medical research, or shape the future of health technology, an MRes in Data Science for Health equips you with the analytical expertise and hands-on experience to make a meaningful impact in this rapidly evolving field.

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.

The programme is split into a 120 credit research project and 60 credits of specialised taught modules. Students are able to choose a project that appeals to their interests and work alongside internationally recognised scientists gaining hands on experience in state of the art techniques. The opportunity to undertake specialist taught modules will compliment this research, allowing students to delve deeper into prediction modelling, precision medicine and clinical trials.

This MRes 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 Masters 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 would prefer a larger taught component to their degree, we have two MSc courses in Data Science for Health:

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, https://www.liverpool.ac.uk/courses/health-data-science-msc#about-this-course

For Students who do not have any previous experience or quantitative training, please see our MSc Data Science for Health (conversion), https://www.liverpool.ac.uk/courses/data-science-for-health-conversion-msc which

is specifically designed for students who are wishing to move into the field of data science irrespective of their background and previous training.

What you'll learn

- Communicate information, ideas, problems, and solutions to both specialist and non-specialist audiences
- Select and apply relevant methods to analyse data and interpret their validity
- Critically appraise literature, concepts, and research techniques related to research in data science
- Apply advanced statistical methods to the analysis of health data
- Use originality of thought and self-directed learning skills to tackle and solve problems
- Plan and conduct an original piece of research in health data

Course content

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

Semester one

Compulsory module

DASC510	Data Science for Health Research Project	This module is the first of a two-part research project and gives direct authentic experience in developing and planning a novel empirical research project. Students will use appropriate methodologies to answer a specific gap in existing knowledge in health data science. Students can choose from a selection of applied and/or methodological research studies or may choose to define their own research question/study, with supervision provided by a member of academic staff.

The full structure of this course is still under development and will be available soon.

Modules

Optional modules	Credits
INTRODUCTION TO HEALTH DATA SCIENCE (DASC501)	15
STATISTICS FOR HEALTH RESEARCH (DASC502)	15
USING ROUTINE DATA FOR PUBLIC HEALTH (DASC503)	15
COMPUTER PROGRAMMING FOR HEALTH RESEARCH (DASC509)	15

Optional modules	Credits
AN INTRODUCTION TO QUALITATIVE RESEARCH (PUBH160)	15
PRACTICAL RESEARCH SKILLS (PSYC644)	30

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

Semester two

Compulsory module

DASC511	Data Science for Health Research Project	This module is the second of a two-part research project and gives direct authentic experience in conducting and reporting on a novel empirical research project. Students will use appropriate methodologies to answer a specific gap in existing knowledge in health data science. Students can choose from a selection of applied and/or methodological research studies or may choose to define their own research question/study, with supervision provided by a member of academic staff.

The full structure of this course is still under development and will be available soon.

Modules

Optional modules	Credits
EVALUATION OF HEALTHCARE INTERVENTIONS (DASC504)	15
ACTIONABLE HEALTHCARE DATA ANALYTICS (DASC505)	15

Optional modules	Credits
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
ARTIFICIAL INTELLIGENCE AND MACHINE LEARNING FOR HEALTH (DASC512)	15

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

Final project

Compulsory module

DASC511	Data Science for Health Research Project	This module is the second of a two-part research project and gives direct authentic experience in conducting and reporting on a novel empirical research project. Students will use appropriate methodologies to answer a specific gap in existing knowledge in health data science. Students can choose from a selection of applied and/or methodological research studies or may choose to define their own research question/study, with supervision provided by a member of academic staff.

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

Teaching and assessment

How you'll learn

We strive to ensure our teaching is integrated with the cutting edge research taking place within the institute. Students are able to choose specialist taught modules that support their research project or their longer term aspirations and interests. The modules are taught through a mixture of approaches including lectures, group projects, guest seminars, workshops, small group tutorials and problem solving exercises.

Students are able to choose a research project which reflects their own interests and will integrate into an active research group within the department while being supported by one of our world class researchers. Experimentation, data collection and analysis will form the core of this work as we aim to develop the next generation of world leading researchers.

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.

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 is envisaged there is 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 MRes 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 - £5,006
Part-time place, per year - £2,503

International fees

Full-time place, per year - £31,250
Part-time place, per year - £15,650

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.

Entry requirements

The qualifications and exam results you'll need to apply for this course.

Postgraduate entry requirements

This Masters 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.

Students wanting to move into the field of data science but who would prefer more taught content, please see our MSc Data Science for Health (conversion) https://www.liverpool.ac.uk/courses/data-science-for-health-conversion-msc.

For Students who 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, https://www.liverpool.ac.uk/courses/health-data-science-msc#about-this-course

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

Your most recent IELTS score	Pre-sessional English course length	On campus or online
		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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