UNIVERSITY OF LIVERPOOL

MSc

Information Technology

Entry requirements	Study mode	Duration
2:2 honours degree	Full-time Part-time	12 months 24 months

Apply by: **29 August 2025**
Starts on: **22 September 2025**

About this course

This programme combines a wide-ranging introduction to the analysis, design and implementation of computer systems, with a comprehensive understanding of cutting-edge research. You'll be immersed in software design, programming, datasets, information systems and web applications and develop all the skills needed to conduct independent research in Information Technology and computer science.

Introduction

This MSc provides a depth of knowledge in information technology (IT), underpinned by a thorough understanding of key issues at the forefront of current research in this discipline.

You'll learn how to design and create software, gain experience of modern programming languages, and discover how databases are used in modern information systems, from supermarket checkouts to online banking.

We'll also equip you with a good understanding of the most significant technologies for developing web applications. These include HTML, Cascading Style Sheets, JavaScript, and PHP.

Further opportunities to specialise and enhance your knowledge are available through a range of optional modules. You could choose to focus on topics including

artificial intelligence, biologically inspired optimisation, neural networks, data mining, machine learning, multi-agent systems, ontologies, semantic web, online map visualisations, or software safety and dependability.

You'll have the opportunity to work as part of a small group on a practical project to find a solution to an IT problem. We'll also provide a thorough grounding in how to plan and conduct research in preparation for your Information Technology MSc dissertation.

Please note: We constantly review and develop our postgraduate programmes. This MSc is also available with the alternative title Computer Science MSc for entry September 2025 and gives students the option to graduate with either of these two MSc titles.

Who is this course for?

This MSc is suitable for graduates with a science or engineering background, such as a degree in mathematics or physical sciences, who wish to build upon the IT skills and knowledge gained during undergraduate study.

The programme is not suitable for computer science graduates.

What you'll learn

- Research skills in information technology (IT)
- How to design and create software using a modern programming language
- The role of structured query language, SQL, in information systems
- Algorithmic techniques and data structures for large datasets
- Key technologies for developing web applications
- Data mining techniques and challenges using real-world datasets
- Bio-inspired algorithms for optimisation and machine learning
- Applications of multi-agent systems
- Privacy, security, encryption and other technologies
- An understanding of all aspects of software safety and dependability
- Neural networks for artificial intelligence
- How maps can be visualised online.

Accreditation

The programme is pending accreditation by BCS, The Chartered Institute for IT, the leading professional body for those working in IT. It is continually updated to reflect new technologies and trends.

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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

You'll study four compulsory modules in semester one.

Modules

Compulsory modules	Credits
RESEARCH METHODS IN COMPUTER SCIENCE (COMP516)	15
PROGRAMMING FUNDAMENTALS (COMP517)	15
DATABASE AND INFORMATION SYSTEMS (COMP518)	15
EFFICIENT ALGORITHMS (COMP526)	15

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

Semester two

You'll study one compulsory module and choose three optional modules in semester two.

Modules

Compulsory modules	Credits
WEB PROGRAMMING (COMP519)	15

Optional modules	Credits
COMPUTATIONAL INTELLIGENCE (COMP575)	15
DATA MINING AND VISUALISATION (COMP527)	15
MACHINE LEARNING AND BIOINSPIRED OPTIMISATION (COMP532)	15
SAFETY AND DEPENDABILITY (COMP524)	15
ADVANCED ALGORITHMIC TECHNIQUES (COMP523)	15
MULTI-AGENT SYSTEMS (COMP310)	15
ONTOLOGIES AND SEMANTIC WEB (COMP318)	15
WEB MAPPING AND GEOVISUALISATION (ENVS456)	15
MSC GROUP PROJECT (COMP530)	15

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

Final project

Modules

Compulsory modules	Credits
MSC PROJECT (COMP702)	60

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

Teaching and assessment

How you'll learn

Teaching on this programme comprises formal lectures, small group tutorials and practical sessions in computer laboratories. You will also take part in one or more group projects. At the end of the year, you'll complete a major individual research project under expert supervision.

How you're assessed

Modules are assessed through a combination of examinations and coursework. The examinations take place at the end of each semester and typically take the form of an in-person written assignment, usually to be completed in a couple of hours. You'll be assigned coursework across the length of each semester. This typically takes the form of class tests, programming assignments or small projects.

Your dissertation is assessed through a combination of written reports and a presentation of your achievements.

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

The programme is pending accreditation by BCS, The Chartered Institute for IT, to partially meet the academic requirement for registration as a Chartered IT Professional.

You'll graduate ready for a wide range of careers in the IT industry. You may wish to join the many students who seek employment at the interface of the IT domain and the subject matter of your first degree. The programme also provides a strong foundation for potential PhD research.

The University of Liverpool is one of the most targeted universities by top employers, according to The Graduate Market 2024, High Fliers Research. This means our graduates are in demand for employment and sought after by top employers worldwide.

Qualifying with an Information Technology MSc degree from Liverpool will equip you with the knowledge, skills and confidence to explore a vast range of opportunities across the globe, in leading companies across various industries.

Previous graduates are working network systems and data communications analysis, computer software engineering, network and computer systems administration, and database administration.

Potential roles you would be well placed to secure on completion of this MSc include:

- Database administrator
- Information systems manager
- Applications developer
- IT consultant
- Network engineer
- Systems designer.

Many of our graduates also choose to continue their studies and embark on PhD research.

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 - £30,800
Part-time place, per year - £15,400

Fees stated are for the 2025-26 academic year.

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 science or engineering related subject, such as Mathematics or Physical Sciences, but should not be in Computer Science.

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

English language requirements for this programme will be added here once confirmed.

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.

Our Pre-sessional English courses vary from 6, 10, 12, 20, 30 or 40 weeks.

You can email us at elc@liverpool.ac.uk for advice on the length of Pre-sessional English course you require. Please let us know your most recent score in one of the following English languages tests so we can assess your current English language ability:

- IELTS
- LanguageCert Academic
- Pearson PTE
- Skills for English
- Oxford Test for English
- Duolingo English Test

We'll be in touch to let you know the length of Pre-sessional English course you require. We'll also confirm whether you can study Pre-Sessional English on campus or online.

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Generated: 24 Jul 2025, 19:57