UNIVERSITY OF LIVERPOOL

MEng (Hons)

Computer Science

UCAS code G401

Study mode	**Duration**	Apply by: **30 June 2026**
Full-time	4 years	Starts on: **28 September 2026**

About this course

From the underlying principles to the very edge of modern technology, this programme will cover all aspects of Computer Science and ensure that when you graduate you will know exactly what is and isn't possible with computers.

Introduction

Study Computer Science at Liverpool and develop a deep understanding of the technology that underpins much of modern life and society. Computer Science is a great choice for those with a keen interest in computers, software and technology. You'll create functional applications as well as how to consistently iterate and improve your work.

After learning core theory you can choose to maintain a balanced mixture of modules throughout your degree or opt to follow a specialist pathway in artificial intelligence, algorithms and optimisation or data science.

This integrated master's programme offers the same specialism pathways as Computer Science BSc (Hons). You will not only develop a good 'all-round' understanding of the academic discipline of computer science, you will also go on to develop a much deeper and systematic specialisation in topics at the forefront of current research.

In the first two years you will cover programming, computer systems, databases, software engineering, algorithmic foundations, complexity of algorithms & decision and computation & language.

The course is accredited by the British Computer Society which means that the course is continually updated and adapted to reflect new technologies and emerging trends.

After you've covered the core elements, we give you the flexibility to tailor your own learning to your own interests, offering specialisms in in artificial intelligence, algorithms and optimisation, data science, and cyber security.

This programme also has a year abroad option, an incredible opportunity to spend an academic year at one of our partner universities. On the 4-year integrated masters programme, you can go abroad either between Year 2 and 3 (apply in Year 2) OR Year 3 and 4 (apply in Year 3).

What you'll learn

- Programming in Java
- Understanding different computer systems
- Building and structuring databases
- Fundamentals of software engineering
- Algorithmic foundations
- Complexity of algorithms and decision
- Computation and language
- Uses and possibilities of biocomputation
- Introduction of computation game theory
- Complex social networks

Accreditation

Accredited by BCS, so opens up a wide variety of career opportunities with excellent employment prospects.

Accreditation in detail

BCS

The Chartered Institute for IT for the purposes of fully meeting the academic requirement for registration as a Chartered IT Professional.

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Course content

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

Year one

In year one you will learn the fundamentals of Computer Science. Starting with an introduction to procedural programming using commonly found language platforms, you'll move on to learn about the importance of hardware and software components within the operation of computer systems, formal analytic techniques and the development of artificial intelligence.

In year one students will typically undertake either COMP101 (Introduction to Programming) or COMP105 (Programming Language Paradigms) based on prior exposure to programming (eg Computer Science A level). Students without a computer science background will normally study COMP101, however in some instances may be permitted to enrol on COMP105 instead.

All other year one modules are required.

Modules

Compulsory modules	Credits
ANALYTIC TECHNIQUES FOR COMPUTER SCIENCE (COMP116)	15
COMPUTER SYSTEMS (COMP124)	15
DATA STRUCTURES AND ALGORITHMS (COMP108)	15
DESIGNING SYSTEMS FOR THE DIGITAL SOCIETY (COMP107)	15
FOUNDATIONS OF COMPUTER SCIENCE (COMP109)	15
INTRODUCTION TO ARTIFICIAL INTELLIGENCE (COMP111)	15

Compulsory modules	Credits
OBJECT-ORIENTED PROGRAMMING (COMP122)	15
INTRODUCTION TO PROGRAMMING (COMP101)	15
PROGRAMMING LANGUAGE PARADIGMS (COMP105)	15

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Year two

In year two you will expand your knowledge of key concepts and skills related to software development and database development. You will also begin to choose which wider elements of computer science you want to engage with such as cyber security, computer based trading in financial markets and principles of computer game design.

You will take the compulsory modules listed, in addition to selected optional modules. Depending on your choice of optional modules you will be able to graduate with one of the following degrees

- MEng Computer Science
- MEng Computer Science with Artificial Intelligence
- MEng Computer Science with Algorithms and Optimisation
- MEng Computer Science with Data Sciences

Modules

Compulsory modules	Credits
COMPLEXITY OF ALGORITHMS (COMP202)	15
DATABASE DEVELOPMENT (COMP207)	15
GROUP SOFTWARE PROJECT (COMP208)	15
SOFTWARE ENGINEERING I (COMP201)	15

Optional modules	Credits
THE C++ PROGRAMMING LANGUAGE (COMP282)	7.5
ADVANCED ARTIFICIAL INTELLIGENCE (COMP219)	15
COMPUTER AIDED SOFTWARE DEVELOPMENT (COMP285)	7.5
COMPUTER-BASED TRADING IN FINANCIAL MARKETS (COMP226)	15
COMPUTER NETWORKS (COMP211)	15
INTRODUCTION TO THEORY OF COMPUTATION (COMP218)	15
DISTRIBUTED SYSTEMS (COMP212)	15
PLANNING YOUR CAREER (COMP221)	7.5
PRINCIPLES OF C AND MEMORY MANAGEMENT (COMP281)	7.5
PRINCIPLES OF COMPUTER GAMES DESIGN AND IMPLEMENTATION (COMP222)	15
SCRIPTING LANGUAGES (COMP284)	7.5

Optional modules	Credits
SOFTWARE DEVELOPMENT TOOLS (COMP220)	15
CYBER SECURITY (COMP232)	15
INTRODUCTION TO DATA SCIENCE (COMP229)	15
APP DEVELOPMENT (COMP228)	15
PROGRAMMING LANGUAGE PARADIGMS (COMP105)	15
BECOMING ENTREPRENEURIAL (ULMS254)	15

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Year three

Year three is where you will start to build on what you've learnt to far with your own research and exploration by undertaking an individual project. Whilst guided, you will work independently to explore a substantial computer science problem in depth, making use of the principles, techniques and methodologies acquired elsewhere in the programme.

You will take the compulsory modules listed, in addition to selected optional modules. Depending on your choice of optional modules you will be able to graduate with one of the following degrees

- MEng Computer Science
- MEng Computer Science with Artificial Intelligence

- MEng Computer Science with Algorithms and Optimisation
- MEng Computer Science with Data Sciences

Modules

Compulsory modules	Credits
HONOURS YEAR COMPUTER SCIENCE PROJECT (COMP390)	30

Optional modules	Credits
BIOCOMPUTATION (COMP305)	15
NETWORK MINING AND ANALYSIS (COMP324)	15
COMPUTATIONAL GAME THEORY AND MECHANISM DESIGN (COMP326)	15
EFFICIENT SEQUENTIAL ALGORITHMS (COMP309)	15
FORMAL METHODS (COMP313)	15
IMAGE PROCESSING (ELEC319)	7.5
INTRODUCTION TO COMPUTATIONAL GAME THEORY (COMP323)	15
KNOWLEDGE REPRESENTATION AND REASONING (COMP304)	15
MULTI-AGENT SYSTEMS (COMP310)	15
NEURAL NETWORKS (ELEC320)	7.5
ONTOLOGIES AND SEMANTIC WEB (COMP318)	15

Optional modules	Credits
OPTIMISATION (COMP331)	15
AUTONOMOUS MOBILE ROBOTICS (COMP329)	15
COMPUTER FORENSICS (COMP343)	15
BIG DATA ANALYTICS (COMP336)	15
COMPUTER VISION (COMP338)	15
DATA MINING AND VISUALISATION (COMP337)	15
HIGH PERFORMANCE COMPUTING (COMP328)	15
ADVANCED TOPICS IN COMPUTER GAME DEVELOPMENT (COMP342)	15
SOFTWARE ENGINEERING II (COMP319)	15
COMMUNICATING COMPUTER SCIENCE (COMP335)	15
ROBOT PERCEPTION AND MANIPULATION (COMP341)	15
CYBERPSYCHOLOGY-HUMAN COMPUTER INTERACTION (PSYC327)	15
CLOUD COMPUTING FOR E-COMMERCE (COMP315)	15
MUSIC INTELLIGENCE (COMP346)	15

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enhancing alignment with our research strengths. The course content currently shown on this page reflects the programme as it is running in September 2026. This page will be updated for students beginning in September 2027 by 1 September 2026 at the latest.

Year four

In year four you will join with the MSc programme for students with a computer science first degree. You will undertake a research-oriented group project in the first semester and a research-oriented individual project in the second.

Alongside your compulsory modules, you will also select from a range of optional modules.

Modules

Compulsory modules	Credits
MSC GROUP PROJECT (COMP530)	15

Optional modules	Credits
ADVANCED ALGORITHMIC TECHNIQUES (COMP523)	15
BIG DATA ANALYTICS (COMP529)	15
COMPUTATIONAL INTELLIGENCE (COMP575)	15
DATA MINING AND VISUALISATION (COMP527)	15
KNOWLEDGE REPRESENTATION (COMP521)	15
MACHINE LEARNING AND BIOINSPIRED OPTIMISATION (COMP532)	15

Optional modules	Credits
PRIVACY AND SECURITY (COMP522)	15
SAFETY AND DEPENDABILITY (COMP524)	15
MULTI-CORE AND MULTI-PROCESSOR PROGRAMMING (COMP528)	15
OPTIMISATION (COMP557)	15
QUANTUM COMPUTING AND SECURITY (COMP535)	15
GEOGRAPHIC DATA SCIENCE (ENVS563)	15
ALGORITHMIC GAME THEORY (COMP559)	15
ADVANCED GEOVISUALISATION (ENVS456)	15

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Teaching and assessment

How you'll learn

Teaching is a mix of formal lectures, small group tutorials and supervised laboratory-based practical sessions. Students also undertake individual and group projects. Key problem solving skills and employability skills, like presentation and teamwork skills, are developed throughout the programme.

How you're assessed

The main modes of assessment are through a combination of coursework and examination, but depending on the modules taken you may encounter project work, presentations (individual or group), and specific tests/tasks focused on solidifying learning outcomes.

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.

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Careers and employability

Liverpool's computer science graduates go onto well-paid graduate jobs and careers such as: computer programmer; software developer; systems analyst; software engineer; technical consultant; web designer.

Computer science graduates will enter a high-in-demand pool in the field with possible roles in:

- computer programmers, web developers, or software engineers
- data scientists
- artificial intelligence researchers
- systems analysts
- technical consultants.

Recent employers include:

- BAE Systems
- BT
- Guardian Media Group
- Royal Bank of Scotland
- Siemens
- Unilever

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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 - £9,790
Year in industry fee - £1,955
Year abroad fee - £1,465 (applies to year in China)

International fees

Full-time place, per year - £32,000
Year in industry fee - £1,955
Year abroad fee - £16,000 (applies to year in China)

The fees shown are for the academic year 2026/27. Please be advised that tuition fees may increase each year for both UK and international students. For UK students, this will be subject to the government's regulated fee limits.

Tuition fees cover the cost of your teaching and assessment, operating facilities such as libraries, IT equipment, and access to academic and personal support. 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.

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Entry requirements

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

A levels

AAB
in A levels including Maths or Computer Science. Mathematics (Pure), Mathematics (Pure and Applied), and Mathematics (Pure) and Statistics are acceptable. CCEA A level Software Systems Development and CCEA A level in Digital Technology (Northern Ireland) aren't acceptable subjects. We don't accept A level IT.

Applicants with the Extended Project Qualification (EPQ) are eligible for a reduction in grade requirements. For this course, the offer is **ABB** from A levels, with **A** in the EPQ including A level Mathematics or Computer Science.

You may automatically qualify for reduced entry requirements through our contextual offers scheme. Based on your personal circumstances, you may automatically qualify for up to a two-grade reduction in the entry requirements needed for this course. When you apply, we consider a range of factors – such as where you live – to assess if you're eligible for a grade reduction. You don't have to make an application for a grade reduction – we'll do all the work.

Find out more about how we make reduced grade offers.

T levels

You'll need T level Science or ICT, alongside A level Mathematics or Computer Science. T Level Science or ICT is accepted with an overall grade of Distinction to include the grade of Distinction in the specialism component and grade B in the core.

Applicants should contact us by completing the enquiry form on our website to discuss specific requirements in the core components and the occupational specialism.

GCSE

Further Education requirements, in addition to Level 3 GCSE qualifications, must be met. GCSE grade minimum 4/C in English and 4/C in Mathematics.

Subject requirements

A level Mathematics or Computer Science is required. For applicants from England: For science A levels that include the separately graded practical endorsement, a "Pass" is required.

BTEC Level 3 National Extended Certificate

D in BTEC and AA in A levels (to include either Mathematics or Computer Science).

IT and ICT are not relevant BTEC subjects and cannot be accepted in lieu of the required A level subjects.

BTEC Level 3 Diploma

DD in BTEC and A in A level in Mathematics or Computer Science.

BTEC Level 3 National Extended Diploma

D*DD in a relevant diploma plus A level Maths or Computer Science grade B (GCSE Maths grade A/7 required if A level Mathematics not taken).

Relevant diplomas are:

- Computer Science
- Mathematics
- Engineering.

International Baccalaureate

34 points overall or 6,6,5 in 3 HL subjects including Mathematics/Computer Science.

IB Maths ‘Analysis and Approaches’ or ‘Applications and Interpretation’ pathways are acceptable at Higher Level as a Mathematical subject.

Irish Leaving Certificate

H1,H1,H2,H2,H2,H3, including H1 in Higher Mathematics or Computer Science. We also require a minimum of H6 in Higher English.

Scottish Higher/Advanced Higher

Acceptable on same basis as A levels, or higher grades AAABB and Advanced Higher

grade A in Maths or Computer Science.

Welsh Baccalaureate Advanced

Acceptable at grade B (with A levels AA including Mathematics or Computer Science).

Cambridge Pre-U Diploma

Principal subjects acceptable in lieu of A levels. D3 in Cambridge Pre U Principal Subject is accepted as equivalent to A-Level grade A M2 in Cambridge Pre U Principal Subject is accepted as equivalent to A-Level grade B Global Perspectives and Short Courses are not accepted.

Access

Pass Access with 36 Level 3 credits at Distinction (including 15 in Mathematical or Computer Science credits) and 9 Level 3 credits at Merit. Open Awards Access Diploma in Computing and Digital Technology isn't acceptable as there isn't enough relevant content.

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 direct entry requirements. Although there's no direct Foundation Certificate route to this course, completing a Foundation Certificate, such as that offered by the University of Liverpool International College, can guarantee you a place on a number of similar courses which may interest you.

Alternative entry requirements

- If your qualification isn't listed here, or you're taking a combination of qualifications, contact us for advice
- Applications from mature students are welcome.

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

6.0 overall, with no component below 5.5

TOEFL iBT

If you took a TOEFL test on or before 20 January 2026, you'll need 78 overall, with minimum scores of listening 17, writing 17, reading 17 and speaking 19. If you took a TOEFL test from 21 January 2026 onwards, when a new scoring system was introduced, you'll need 4 overall, with 4 or above in all components. TOEFL Home Edition not accepted.

Duolingo English Test

115 overall, with speaking, reading and writing not less than 105, and listening not below 100

Pearson PTE Academic

59 overall, with no component below 59

LanguageCert Academic

65 overall, with no skill below 60

Cambridge IGCSE First Language English 0500

Grade C overall, with a minimum of grade 2 in speaking and listening. Speaking and

listening must be separately endorsed on the certificate.

Cambridge IGCSE First Language English 0990

Grade 4 overall, with Merit in speaking and listening

Cambridge IGCSE Second Language English 0510/0511

0510: Grade C overall, with a minimum of grade 2 in speaking. Speaking must be separately endorsed on the certificate. 0511: Grade C overall.

Cambridge IGCSE Second Language English 0993/0991

0993: Grade 5 overall, with a minimum of grade 2 in speaking. Speaking must be separately endorsed on the certificate. 0991: Grade 5 overall.

Cambridge ESOL Level 2/3 Advanced

169 overall, with no paper below 162

International Baccalaureate English A: Literature or Language & Literature

Grade 4 at Standard Level or grade 4 at Higher Level

International Baccalaureate English B

Grade 6 at Standard Level or grade 5 at Higher Level

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
5.5 overall, with no component below 5.5	6 weeks	On campus or online
5.5 overall, with no component below 5.0	10 weeks	On campus or online
5.0 overall, with no component below 5.0	12 weeks	Online
5.0 overall, with no component below 4.5	20 weeks	On campus
4.5 overall, with no component below 4.5	30 weeks	On campus
4.0 overall, with 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 6.0 overall, with no component below 5.5, for further details.

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Generated: 31 Jul 2026, 15:27

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