MEng

Computer Science and Electronic Engineering with a Year in Industry

UCAS code GHKP

Entry requirements	Study mode	Duration
A level: ABB	Full-time	5 years

Apply by: **14 January 2026**
Starts on: **28 September 2026**

About this course

Smart devices shape the way we live, both now and in the future. Study Computer Science and Electronic Engineering at Liverpool and ensure you're a part of the rapid technological development taking place globally.

Introduction

This programme combines the core elements of electronic engineering with those of computer science, which is the intellectual discipline underlying all aspects of software development.

Combining elements from these two disciplines will equip you with an added breadth of knowledge and greater specialisation. Our graduates are in demand because of their fluency both in the language of electronic engineers, as well as that of computer scientists, enabling you to bridge the gap between software systems and the real world.

You'll be taught by staff who are actively engaged in research, most with international reputations, ensuring you'll receive the most up-to-date and commercially-relevant education.

The MEng degree programme provides added depth to the BEng (Hons), and you will study a greater range of subjects. You will spend your third year on industrial placement acquiring experience and awareness of practical business and industrial environments. It is the best preparation for either graduate-level employment or undertaking a research degree.

What you'll learn

- A broad educational background in electronics and computing
- Critical thinking
- Teamwork
- The practical application of concepts and theory, always with awareness of their relevance to the real world
- How to take projects from conception, through to design, implementation and operation
- Use of industry standard tools, technologies and working methods.

Accreditation

This course is pending accreditation by the Institution of Engineering and Technology on behalf of the Engineering Council for the purposes of fully meeting the academic requirement for registration as a Chartered Engineer.

Accreditation in detail

IET

IET are one of the world's leading professional societies for engineers and technicians and their accreditation covers a whole range of subjects including electrical, electronic, manufacturing, mechanical, systems and software engineering, as well as bioengineering, nanotechnology and renewable energy. It's recognised globally as an indicator of quality through

the Washington and Sydney accords, which are governed by the International Engineering Alliance (IEA).

Course content

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

Year one

During year one you will be introduced to the fundamentals of electronics as well as the underlying principles and theory of computing. Your lecture modules will cover the core subjects of electronic circuits, digital electronics, Java programming and data structures.

In addition, you will take modules such as mathematics and spend one day a week doing practical work in both the computer and electronics laboratories. This will give you excellent practical and transferable skills vital for subsequent years of the programme and invaluable in your future career.

Modules

Compulsory modules	Credits
ELECTRICAL CIRCUITS & SYSTEMS (ELEC142)	15
DIGITAL & INTEGRATED ELECTRONICS DESIGN (ELEC143)	15
ELECTRONIC CIRCUITS (ELEC104)	15
ENGINEERING SKILLS (ELEC171)	15
OBJECT-ORIENTED PROGRAMMING (COMP122)	15
MATHEMATICS A FOR ELECTRICAL ENGINEERS (ELEC191)	15
MATHEMATICS B FOR ELECTRICAL ENGINEERS (ELEC192)	15

Optional modules	Credits
INTRODUCTION TO PROGRAMMING (COMP101)	15
PROGRAMMING LANGUAGE PARADIGMS (COMP105)	15

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

Year two

The second year builds on the first with core modules in software engineering, database development, digital electronics, and signals and communication systems. More time is spent in the electronics laboratory doing practical work to consolidate the knowledge learnt in lectures and partaking in an extended team project.

Modules

Compulsory modules	Credits
COMMUNICATION SYSTEMS (ELEC202)	7.5
DATABASE DEVELOPMENT (COMP207)	15
DIGITAL ELECTRONICS & MICROPROCESSOR SYSTEMS (ELEC211)	15
INSTRUMENTATION & CONTROL (ELEC207)	15
PROJECT, PROBLEM SOLVING & INDUSTRIAL AWARENESS (ELEC222)	7.5
SIGNALS AND SYSTEMS (ELEC270)	15
SOFTWARE ENGINEERING I (COMP201)	15

Compulsory modules	Credits
DISTRIBUTED SYSTEMS (COMP212)	15
AMPLIFIER CIRCUITS – DESIGN AND APPLICATIONS (ELEC219)	15

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

Year three

Year three of the programme is taken up with a placement in a professional software industry or electronic engineering environment.

Modules

Compulsory modules	Credits
UG PLACEMENT IN YEAR3 (ELEC299)	120

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

Year four

You will undertake an extended individual project during this year. Recent projects have included real-time GPS tracking of a vehicle fleet by mobile phones, and mobile multi-user dungeon (MUD) game using SMS messaging. You can choose lecture-based modules from both Electronic Engineering and Computer Science.

Modules

Compulsory modules	Credits
MENG PROJECT (ELEC440)	30

Compulsory modules	Credits
APPLICATION DEVELOPMENT WITH C++ (ELEC362)	15
LOW POWER COMPUTER ARCHITECTURE (ELEC370)	15
NEURAL NETWORKS (ELEC320)	7.5
ENGINEERING MANAGEMENT & ENTREPRENEURIAL SKILLS (ELEC352)	7.5

Optional modules	Credits
ADVANCED MODERN MANAGEMENT (MNGT352)	7.5
DIGITAL AND WIRELESS COMMUNICATIONS (ELEC377)	15
DIGITAL CONTROL AND OPTIMISATION (ELEC303)	15
FORMAL METHODS (COMP313)	15
INTRODUCTION TO COMPUTATIONAL GAME THEORY (COMP323)	15
MULTI-AGENT SYSTEMS (COMP310)	15
PHOTONICS AND OPTICAL INFORMATION SYSTEMS (ELEC313)	15
SIGNAL PROCESSING AND DIGITAL FILTERING (ELEC309)	15
SOFTWARE ENGINEERING II (COMP319)	15
BIOCOMPUTATION (COMP305)	15
PLASMA SYSTEM ENGINEERING (ELEC391)	7.5

Optional modules	Credits
CLOUD COMPUTING FOR E-COMMERCE (COMP315)	15

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

Year five

During this final year, students continue compulsory modules, choose further options, and undertake an extended group project. The project would normally require both hardware and software components.

Modules

Compulsory modules	Credits
COMMUNICATIONS NETWORKS (ELEC461)	15
DIGITAL SYSTEM DESIGN (ELEC473)	15
INFORMATION THEORY AND CODING (ELEC415)	7.5
KNOWLEDGE REPRESENTATION (COMP521)	15
MANAGEMENT OF DESIGN (MNGT413)	7.5
MENG GROUP PROJECT (EEE) (ELEC450)	30
EFFICIENT ALGORITHMS (COMP526)	15

Optional modules	Credits
ADVANCED SIGNAL PROCESSING (ELEC474)	15

Optional modules	Credits
DIGITAL AND WIRELESS COMMUNICATIONS (ELEC477)	15
MEASUREMENT, MONITORING AND SENSORS (ELEC421)	15
MICROPROCESSOR SYSTEMS (ELEC422)	15
PRIVACY AND SECURITY (COMP522)	15
RADIO PROPAGATION FOR WIRELESS SYSTEMS (ELEC411)	7.5
SAFETY AND DEPENDABILITY (COMP524)	15
ENGINEERING PROGRAMMING (ELEC431)	15
THE INTERNET OF THINGS: ARCHITECTURE AND APPLICATIONS (ELEC423)	15
ADVANCED SYSTEMS MODELLING & CONTROL (ELEC476)	15
BIOCOMPUTATION (COMP305)	15
SOFTWARE ENGINEERING II (COMP319)	15
INTRODUCTION TO COMPUTATIONAL GAME THEORY (COMP323)	15
PHOTONICS AND OPTICAL INFORMATION SYSTEMS (ELEC313)	15
PLASMA SYSTEM ENGINEERING (ELEC391)	7.5
ADVANCED MODERN MANAGEMENT (MNGT352)	7.5
MULTI-AGENT SYSTEMS (COMP310)	15
FORMAL METHODS (COMP313)	15

Optional modules	Credits
CLOUD COMPUTING FOR E-COMMERCE (COMP315)	15
DIGITAL CONTROL AND OPTIMISATION (ELEC303)	15
SIGNAL PROCESSING AND DIGITAL FILTERING (ELEC309)	15

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

Teaching and assessment

How you'll learn

Programmes are taught over two semesters, with examinations at the end of each semester. Modules vary from those which are assessed by examination only, to others which are continuous assessment only. All programmes incorporate a substantial practical component, with an increasing emphasis on project work as you progress through to the final year.

How you're assessed

Assessment on this course will include a mix of exams, coursework and projects.

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

Some of our graduates go on to work in the industrial sector, in government and in education, whilst others enter non-technical professions such as banking, accountancy, management and law.

Specific career paths are many and varied, and have previously included design engineer, systems engineer, medical physicist, postdoctoral research scientist, and radio frequency scientist.

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 a 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.

Many graduates have moved on to have careers with employers in the following industries:

- Technology: ARM Holdings Ltd, Ericsson Ltd, Logica CMG, Marconi, Siemens UK
- Energy: British Nuclear Group, Energetix Group PLC, Scottish Power, United Utilities PLC.
- Healthcare: Royal Liverpool University Hospital
- Government/Research: Daresbury Laboratory, Ministry of Defence, Science and Technology Facilities Council, The Highways Agency
- Engineering/Manufacturing: Deva Electronic Controls, Heap and Partners Ltd
- Royal Liverpool University Hospital (Clinical Engineering)
- Science and Technology Facilities Council
- Scottish Power
- Siemens UK
- The Highways Agency
- United Utilities PLC.

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 - £9,535
Year in industry fee - £1,850

International fees

Full-time place, per year - £29,900
Year in industry fee - £1,850

Fees are for academic year 2025/26.

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. This may include a laptop, books or stationery. All safety equipment, other than boots, is provided free of charge by the department.

Find out more about the additional study costs that may apply to this course.

^ Back to top

Entry requirements

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

A levels

ABB
including Mathematics and a science subject.

Applicants with the Extended Project Qualification (EPQ) are eligible for a reduction in grade requirements. For this course, the offer is **BBB** with **A** in the EPQ.

T levels

T levels are not currently accepted.

GCSE

4/C in English and 4/C in Mathematics

Subject requirements

Acceptable sciences: Applied ICT, Biology (and Human Biology), Chemistry, Computer Science; Economics, Electronics, Environmental Science, Further Mathematics, Geography, Geology, ICT, Life and Health Sciences, Mathematics, Psychology, Physics; Statistics.

BTEC Level 3 National Extended Certificate

Distinction in BTEC (any subject) plus AB in A Levels.

A Levels must include Mathematics and a science subject (Chemistry, Computer Science, Further Mathematics, Physics or Electronics).

BTEC Level 3 Diploma

D*D in a relevant BTEC considered alongside grade B in A Level Mathematics.

BTEC Level 3 National Extended Diploma

D*D*D in a relevant Diploma, including Distinction in 'Further Mathematics for Engineering Technicians' unit. Students will also be required to take an online

Mathematics assessment, please contact the University for further information.

International Baccalaureate

32 points overall and no score less than 4 and including 5 in HL Mathematics and 5 in a second HL science subject, or pass the IB Diploma with 6,5,5 in three Higher Level subjects, including HL Mathematics and a second HL science subject.

Irish Leaving Certificate

H1, H2, H2, H2, H3, H3 including H2 or above in Mathematics and a science subject (Chemistry, Computer Science, Further Mathematics, Physics or Electronics).

Scottish Higher/Advanced Higher

ABB in Advanced Highers including Mathematics and a science subject (Chemistry, Computer Science, Further Mathematics, Physics or Electronics).

Welsh Baccalaureate Advanced

B in the Welsh Baccalaureate, plus AB at A level (including Mathematics and a second science subject).

Cambridge Pre-U Diploma

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 to HE Diploma in a relevant subject with 45 Level 3 credits with 33 at Distinction (including 15 Mathematics credits) and 12 at Merit. Applicants will be required to take a maths test.

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, you could be eligible for a Pre-Master's course. This is offered on campus at the University of Liverpool International College, in partnership with Kaplan International Pathways. It's a specialist preparation course for

postgraduate study, and when you pass the Pre-Master's at the required level with good attendance, you're guaranteed entry to a University of Liverpool master's degree.

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

78 overall, with minimum scores of listening 17, writing 17, reading 17 and speaking 19. 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
5.5 overall, with no component below 5.0	10 weeks	On campus and online options available
5.0 overall, with no component below 5.0	12 weeks	On campus and online options available
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.

Alternative entry requirements

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