Edge Hill University

Software Engineering

BSc (Hons)

UCAS code: II33

Unlock the possibilities of modern computing with our software engineering degree. Master a range of programming languages and modelling skills on a software engineering degree awarded accreditation by BCS, The Chartered Institute for IT.

- International students can apply
- Professional accreditation
- Sandwich year option available
- Studying abroad option available

Key facts

bcs Accredited Degree

VANLANG UNIVERSITY

Course length:	3 years full-time
Start dates:	September 2026, September 2027
Example offers:	BCC-BBC (A Level) or DMM (BTEC)104-112 UCAS Tariff points
Department:	Computer Science
Faculty:	Arts and Sciences
Location:	Edge Hill University

Overview

Course overview

Discover how to design, develop and build systems that help businesses overcome issues and technological problems. Expand your technical expertise in computer networking, system development, databases and mobile. Prepare for a rewarding career as a software engineer.

Do you have a keen eye for detail? Do you rise to challenges enthusiastically? Our industry-aligned software engineering degree provides you with practical experience in current industry practices that employers value.

Through bespoke modules including Software Development Tools and Testing, you'll work on real-world projects where you'll create and test software solutions and explore how to maintain and improve them. Along the way, you'll develop the essential problem-solving skills and the confidence valued by employers, so that you can hit the ground running in your future career.

We'll also provide you with the opportunity to enhance your learning by studying abroad or gaining hands-on industry experience through an optional placement year. Whichever path you choose, you'll graduate with real-world skills, a fresh perspective and the confidence to excel in the fast-paced field of software engineering.

You'll graduate from the BSc Software Engineering course with the skills needed to manage the software systems businesses rely on. Kickstart your career and gain the practical skills that boost your creative thinking and confidence in the quality of your work.

Software engineers can find themselves in a variety of technical roles, from working on AI in gaming, designing distribution systems or developing mobile software and hardware platforms.

An accredited degree

Please note, the following is only applicable to students who study this course at the Edge Hill University campus.

This course is accredited by BCS, The Chartered Institute for IT, for the purposes of fully meeting the academic requirement for registration as a Chartered IT Professional. Successfully completing an accredited honours degree is the first step to full BCS membership and to being awarded chartered status.

Accreditations

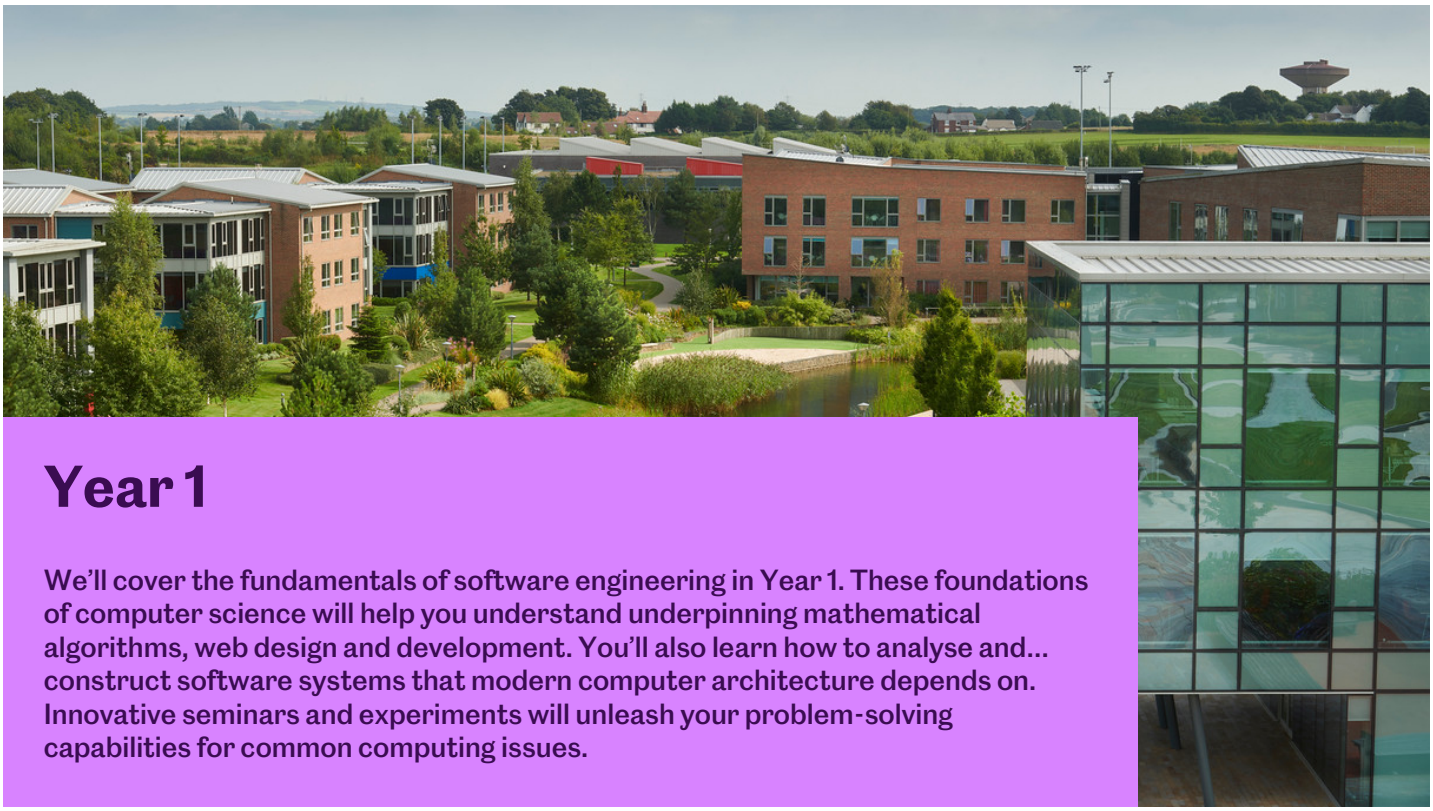
bcs Accredited Degree

BCS, The Chartered Institute for IT

VANLANG UNIVERSITY

This course is also delivered by Van Lang University, Vietnam.

What you'll study



Year 1

We'll cover the fundamentals of software engineering in Year 1. These foundations of computer science will help you understand underpinning mathematical algorithms, web design and development. You'll also learn how to analyse and... construct software systems that modern computer architecture depends on. Innovative seminars and experiments will unleash your problem-solving capabilities for common computing issues.

Compulsory modules:

Accessible Web Design and Development

Accessible Web Design and Development is a fusion of two distinct areas in the world of web content production. These are web design and web development. In recent years, in a response to the rapidly changing nature of the World Wide Web (WWW), there has been a considerable push towards a more standards based and accessible approach to website development, using tools such as hypertext markup language (HTML) and cascading style sheets (CSS). There has also been an increase in the number of web authoring tools to aid in the development of websites. This module will provide you with a sound understanding of the WWW, the related technologies, the relationships between them and also their use. This will be a valuable foundation for all aspects of work within the web industry. You will discover colour and design theories, layout and typography in web design and the use of HTML, CSS and the basics of developing accessible websites in web development.

Coursework: 100%

Module code: CIS1705 Credits: 20

Computer Systems Architecture and Networks

Computer Systems Architecture & Networks examines how the world is underpinned by information technology. Integrating theory and practice, the module will develop your understanding of the essential concepts in computer systems' architecture and networks. You will discover how current and modern computer architectures operate, analyse the technology on which they depend, and explore the basic principles of networks, including the interconnecting components and protocols used in enabling reliable communications. You will develop skills and knowledge in binary logic which forms the basis of electronic systems, as well as the application of operating systems to support the running of multiple software tools simultaneously. From a network perspective, you will look at network topologies, different types of networks, and the basic principles of protocol layers and models used in reliable data communications.

Coursework: 100%

Module code: CIS1701 Credits: 20

Foundations of Computer Science

Foundations of Computer Science introduces you to the theoretical and practical concepts of computer science. The module recognises that technology is in everyday life, from homes to the workplace, cars or portable or wearable devices. The true usefulness of this technology is in almost all cases enabled through software, and the amount of software that we interact with will continue to increase. You will explore the theoretical foundations of computer science to gain a deeper understanding of the problems and solutions outlined in lectures. The module will focus on the theories, methods and techniques in computer science as well as their applications and problems solving. You will learn strategies to split a problem into individual steps to solve, underpinned with the relevant mathematical knowledge and insights into the user environment.

Coursework: 100%

Module code: CIS1700 Credits: 20

Professional Practice 1

Professional Practice 1 introduces you to the computing profession and the professional practices of the industry. You will be introduced to the relevant regulatory requirements and accreditations governing the computing profession. You will also discover the role of professional bodies such as The Chartered Institute for IT (BCS), TIGA the network for games developers and digital publishers, and The National Cyber Security Centre (NCSC). Another key strand of the module is the development of key transferable skills. These include working independently and as part of a team, communicating effectively, and presenting information in a variety of formats including both written and oral. You will be encouraged to become a reflective and questioning learner and devise a personal development plan.

Practical: 20% Coursework: 80%

Module code: CIS1704 Credits: 20

Programming 1

Programming 1 provides a practical introduction to the fundamentals of computer programming. You will be introduced to computational thinking - a problem solving approach that underpins programming, the basics of algorithmic design and the analytical techniques and processes essential for specifying, designing and implementing simple software systems. The module will teach you how to tackle large problems by breaking them down into a sequence of smaller, more manageable issues. This is a foundation module for which no previous experience in programming is required.

Coursework: 100%

Module code: CIS1702 Credits: 20

Programming 2

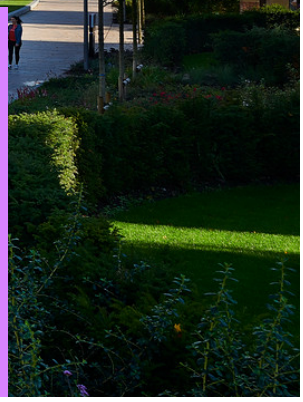
Programming 2 provides a practical exploration of an object-oriented approach to software development. Programming is a key skill for analysts, software testers and software developers. You will be introduced to the analytical techniques and processes essential for specifying, designing and implementing basic object-orientated software systems. Through the lens of object-orientation, you will explore complex data structures and gain a better understanding of objects, object scope, object instantiation and their life cycle. The module will equip you with the skills needed to develop sophisticated object-orientated software systems consisting of multiple source code files and interacting objects, each with their own procedures.

Coursework: 100%

Module code: CIS1703 Credits: 20

Year 2

Software engineering is a balance between theory and practical. In Year 2 of the software engineering course, you'll explore topics including databases and security and build experience of the software testing process. To offer support,... we teach a module dedicated to enhancing your employability and developing essential skills for the workplace. If you enjoy it, you can also choose to do a 12-month placement in industry.



Compulsory modules:

Database Systems

Database Systems introduces you to the fundamental concepts in database design. Designing and implementing databases is a key skill in the computing industry where businesses of all sizes depend upon database management systems to gain a competitive advantage. Databases also play a central role in many information systems and are an integral part of e-commerce. This module will develop your practical skills in database modelling, development and design. You will discover the techniques for appropriate and efficient conceptual, logical and physical database design and learn how to create, handle, manipulate and manage database systems and resources.

Coursework: 60% Exams: 40%

Module code: CIS2700 Credits: 20

Introduction to Security

Introduction to Security outlines the basic concepts and areas of cyber security. Security is a crucial part of computer systems as it plays an essential role in preventing data breaches and helping achieving business continuity and compliance with data protection regulations. The module will introduce you to the basic concepts of security, how to identify security threats and vulnerabilities, and basic attacks and defence approaches. Security is a complex topic and the module will equip you with an understanding of security issues that apply in the use of networked computer systems in relation to personal data protection and information security.

Coursework: 100%

Module code: CIS2718 Credits: 20

Object-Orientated Programming

Object-Orientated Programming immerses you in object-orientated approaches to software development. Many programming languages, such as C++, C#, Java, Python, Ruby, Scala and VB.NET have been built with object-orientation in mind, while other historically procedural languages, from Cobol, Fortran and Pascal to Perl, PHP and Visual Basic, have been adapted to accommodate it. IT professionals with object-orientated programming skills are in high demand. This module presents the concepts underpinning object-orientated programming and explores how it's used to model and implement modern software systems. You will gain an in-depth understanding of the object-oriented modelling processes, learn how to translate a model into a software design, and discover how to implement that design in a modern object-oriented programming language. This will give you experience of the full software development life-cycle, from design to implementation. You will build your expertise from writing simple single source code file solutions, to complex, well designed systems organised into packages using the appropriate features of an object-orientated high-level programming language.

Coursework: 60% Exams: 40%

Module code: CIS2702 Credits: 20

Professional Practice II

Professional Practice II introduces you to the importance of teamwork and reflective practice. You will work as part of a team to complete a project by a deadline. This will enable you to focus on the design, production and commercial requirements of the project, as well as the associated risk management, budgetary constraints, and any ethical issues. You will reflect on your learning through the production of an e-portfolio.

Coursework: 100%

Module code: CIS2712 Credits: 20

Software Development Tools and Testing

Software Development Tools and Testing introduces quality assurance in software engineering. A key aspect of software engineering is to ensure the quality of the development process and the final product. Quality assurance is an intrinsic part of the software development life cycle and crucial to prevent project failure. Within quality assurance, testing is an important component receiving increasing emphasis in commercial software development. The module provides a brief history of the development of quality assurance. Exploring the models and measurements in quality assurance activities, you will discover the common standards adopted in the software industry. Software testing methods will also be explored and the importance of this testing in modern software development will be discussed.

Coursework: 60% Exams: 40%

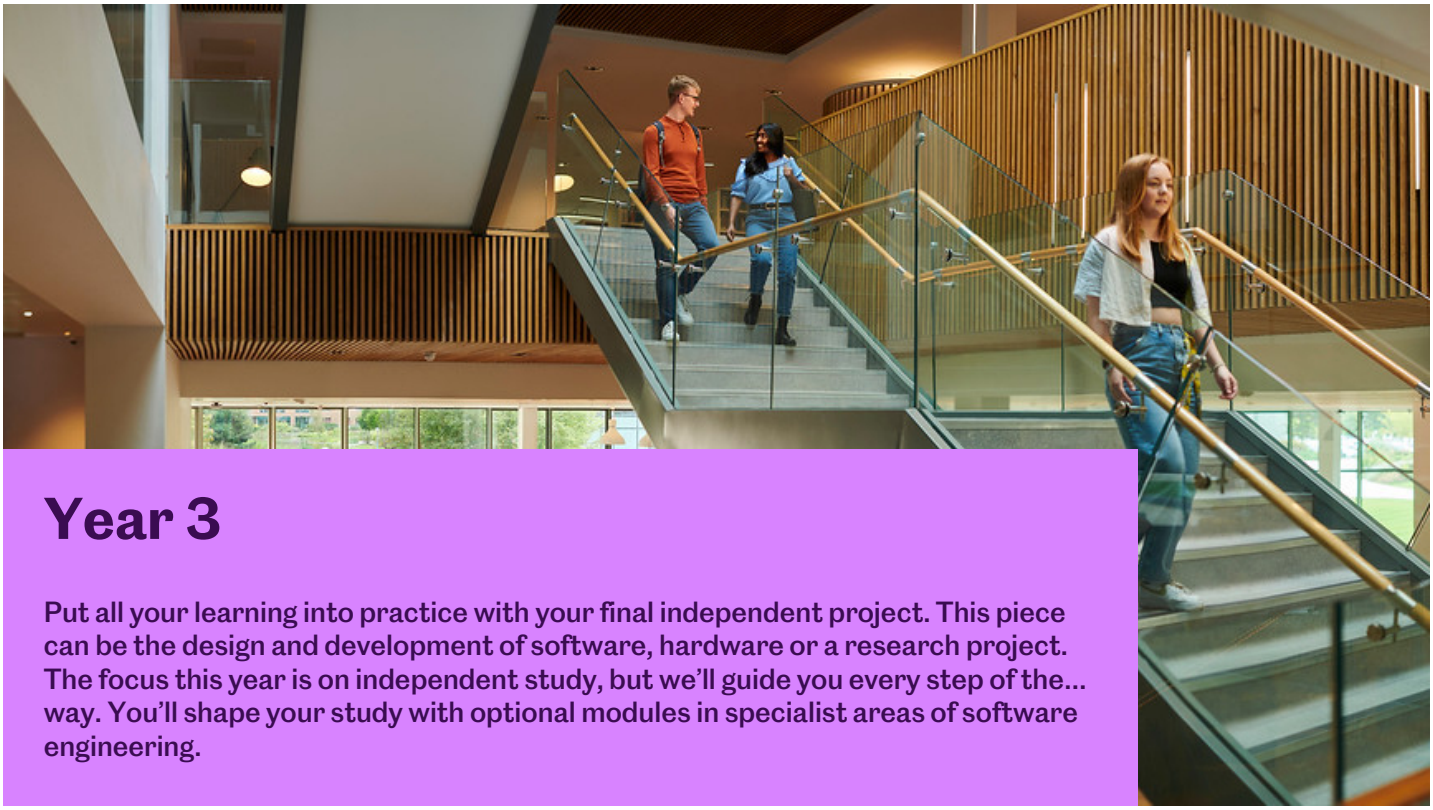
Module code: CIS2723 Credits: 20

Software Engineering

Software Engineering equips you with in-depth knowledge of the software engineering processes and development models, developing skills in producing high quality software documentation. Software Engineering is a systematic approach to the analysis, design, implementation and maintenance of software. Virtually all electrical equipment now includes some kind of software. Even simple software systems have inherent complexity and require correct use of engineering principles in their development. This module provides you with a theoretical and a practical foundation in software engineering. You will learn about the principles and methods of software engineering, including current and emerging software engineering practices and support tools. You will also become familiar with the development of software production artefacts from an industry perspective, including the generation of appropriate documents, under tight schedules and limited resources.

Coursework: 60% Exams: 40%

Module code: CIS2722 Credits: 20



Year 3

Put all your learning into practice with your final independent project. This piece can be the design and development of software, hardware or a research project. The focus this year is on independent study, but we'll guide you every step of the... way. You'll shape your study with optional modules in specialist areas of software engineering.

Compulsory modules:

Advanced Databases

Advanced Databases develops your knowledge of databases and modelling tools through the practical application of appropriate database languages. Databases are an essential element of most small to large computer systems, so it's important that you have the skills to work with complex relational databases as well as more advanced NoSQL (Not Only SQL) database systems. The module will enhance your understanding of RDBMS database systems. These are a type of database management system (DBMS) that stores data in a row-based table structure which connects related data elements. An RDBMS includes functions that maintain the security, accuracy, integrity and consistency of the data. You will also have the opportunity to explore alternative non-tabular database systems that scale easily to handle large amounts of data and high numbers of users.

Coursework: 100%

Module code: CIS3401 Credits: 20

Distributed Systems

Distributed Systems evaluates the structure of parallel and distributed computer systems and applications. Parallel computing enables multiple processors to execute tasks simultaneously while distributed computing divides a single task between multiple computers to achieve a common goal. Advances in communication technology and increased user demands for sophisticated applications have pushed distributed computing models ahead of the centralised approach. Distributed programming frameworks have become enablers of big data analytics and other applications driven by artificial intelligence. On this module you will evaluate the structure of parallel and distributed systems and identify their respective strengths and weaknesses. You will gain a critical understanding of centralised and distributed models of communication technology through a range of modern and representative case studies. The module will culminate with practical, hands-on experience of the planning, design, implementation and evaluation of a small distributed system or application in response to a distributed computing problem.

Coursework: 60% Exams: 40%

Module code: CIS3415 Credits: 20

Embedded Systems

Embedded Systems today form the largest percentage of computer systems in service. They are greater in number than all other types of computer systems put together. Almost all moderately intelligent devices we use or rely upon, from domestic appliances to mobile telephones, motor vehicles, most automated consumer products, dispensers and toys, contain one or more microcontroller devices. These embedded systems are mostly not seen, tucked away in often unreachable and environmentally unfriendly locations. They are often expected to function for long periods of time, for example many years, without fault, attention or maintenance. As a result, they demand some unique engineering requirements. This module explores the principles of embedded systems as essential tools for enabling many other advanced technologies which can be seen or experienced every day. You will be introduced to the basics of the hardware and software unique to microcontrollers as core components of embedded systems. You will program a microcontroller and apply this skill to communicate with or control external devices.

Coursework: 100%

Module code: CIS3421 Credits: 20

Internet Security

Internet Security equips you with an in-depth understanding of the principles of computer, network and application security. The module outlines the key vulnerabilities of a networked computer system and related applications and introduces you to essential defence tools and approaches. While society depends increasingly on computer systems, the systems are accessible from intranets and the internet, thereby increasing the risk to system integrity. A sound understanding of the threats and vulnerabilities of a system, as well as the associated preventative and recovery measures, is essential for information systems professionals. This module will develop your analytical and evaluative skills when working in a complex and unpredictable systems environment. You will develop the expertise to define an appropriate level of security to meet the needs of a network owner.

Coursework: 100%

Module code: CIS3423 Credits: 20

Research and Development Project

Research and Development Project gives you the opportunity to show individual creativity and originality, apply your knowledge and skills, and demonstrate the ability to undertake an individual project through investigative research, problem-solving, effective communication and management. The project will be executed independently under the guidance of a supervisor. In exceptional circumstances group projects may be permitted as long as individual deliverables are clearly identified and this has been agreed with the Module Leader and Supervisor. You will conduct in-depth work on a substantial issue, including researching and analysing the problem and finding and realising a solution.

Practical: 80% Coursework: 20%

Module code: CIS3425 Credits: 40

"To someone considering studying this course at Edge Hill, you're choosing one of the most future-focused degrees. Software engineering gives you skills that are useful anywhere you go. Edge Hill has combined academic support, real industry links, and great facilities to help me grow as a software engineer student."

BSc (Hons) Software Engineering

How you'll study

Teaching methods are designed in consultation with leading employers in the region. Many classes are based in computer workshops, focusing on student activity as a means of learning. We introduce theoretical concepts by building on concrete practical activity.

To enhance your employability, you will be given opportunities to work together and develop the essential people skills to complement your technical ability, while engaging in realistic work-related activities and taking the opportunity to relate theory to practice via a work placement.

Timetables for your first week are normally available at the end of August prior to enrolment in September. You can expect to receive your timetable for the rest of the academic year during your first week. Please note that while we make every effort to ensure that timetables are as student-friendly as possible, scheduled teaching can take place on any day of the week. Wednesday afternoons are normally reserved for sports and cultural activities.

How you'll be assessed

You will be assessed through a combination of practical exercises, reports, essays and examinations. We want you to develop the ability to work effectively both independently and as part of a team, therefore assessment includes both of these forms, though the emphasis is strongly on individual work.

Who will be teaching you

You will be taught by staff who are passionate about student learning and development. The programme team are specialists in computing and active researchers in areas including web information architecture, complex systems, embedded systems, data visualisation and data science. Academic staff are regular contributors to academic conferences and journals.

Facilities

Facilities introduction

The Department of Computer Science is based in the state-of-the-art £13million Tech Hub. This purpose-built development offers highly contemporary suites of outstanding facilities for Computer Science and Engineering students. Our modern computing and engineering laboratories are equipped with comprehensive test and measurement equipment, high-specification computers, high-resolution screens and the latest hardware and software. There are also specialist laboratories for networking and games programming, in addition to a specialist research laboratory, open access laboratory and a Harvard style lecture theatre.

Learning resources

Learning resources include robots and a robotics simulator, wired and wireless networking hardware, graphics software, web development tools, software development environments, big data servers, eye trackers, giant 3D interactive teaching screens, and other specialist software required for studying forensics and internet security techniques.

Entry criteria

Entry requirements

Typical offer 104-112 UCAS Tariff points, for which no specific subjects are required, plus GCSE Mathematics at Grade C or Grade 4 or above (or equivalent).

Please note, for all programmes in the Department of Computer Science, a level 2 numeracy qualification is not considered as equivalent to GCSE Grade C or Grade 4 in Mathematics.

Example offers

A Level	BCC-BBC.
UCAS Tariff points	104-112 points.
BTEC Extended Diploma (or combination of BTEC QCF qualifications)	Distinction, Merit, Merit (DMM).
T Level	Overall grade of Merit.
International Baccalaureate (IB)	We are happy to accept IB qualifications which achieve the required number of UCAS Tariff points.
Access to Higher Education Diploma	45 credits at Level 3, for example 9 credits at Distinction and 36 credits at Merit or 15 credits at Distinction and 30 credits at Merit. The required total can be attained from various credit combinations.

English language requirements

International students require IELTS 6.0, with a score no lower than 5.5 in each individual component, or an equivalent English language qualification.

If your current level of English is half a band or one band lower, either overall or in one or two elements, you may want to consider our Pre-Sessional English course.

Please note, the above examples may differ from actual offers made. A combination of A Level and BTEC awards may also be accepted. If you have a minimum of two A Levels (or equivalent), there is no maximum number of qualifications that we will accept UCAS points from. This includes additional qualifications such as Extended Project Qualification (EPQ), AS Levels that haven't been continued to A Level, and General Studies AS or A Level awards.

Financial support

2026/2027

Tuition fees

UK Full-Time	International
£9,790	**£14,500**
a year	a year

For the academic year 2026/27 the UK Full-Time tuition fee is currently set to £9,790. Please note this is subject to Parliamentary approval and is likely to be increased in line with inflation (RPIX). There may be further inflationary increases in your subsequent years of study. Further details can be found at ehu.ac.uk/fees.

EU/EEA and Swiss students who have settled or pre-settled status under the EU Settlement Scheme, as well as Irish nationals, may be eligible for the UK tuition fee rate.

Financial support

Subject to eligibility, UK students joining this course can apply for a Tuition Fee Loan from the Government to cover the full cost of tuition fees. UK students enrolling on the course may also be eligible to apply for additional funding to help with living costs.

Scholarships

We offer a range of scholarships, which celebrate the determination, commitment and achievement of our students. Many of our scholarships are awarded automatically. There are some however, where you will need to be involved in an application or nomination process. To find out more about our scholarships and check your eligibility, please visit our dedicated scholarships pages.

Money Matters

Please view the relevant Money Matters guide for comprehensive information about the financial support available to eligible UK students.

Money Matters

https://www.edgehill.ac.uk/study/fees-and-funding/

EU/EEA and Swiss students who have settled or pre-settled status under the EU Settlement Scheme may be eligible to apply for financial support. Irish nationals can ordinarily apply to Student Universal Support Ireland (SUSI). If you are an EU student who does not have settled or pre-settled status, or are an international student from a non-EU country, please see our international student finance pages.

Your future career

Career prospects

Software engineering is one of the most popular professions in IT. Those who graduate with a BSc (Hons) Software Engineering degree from Edge Hill typically work in computer manufacturers or software houses to improve computer efficiency at the initial design stage. Other career paths include operating systems design or developing specialist products.

There's a broad range of careers you could go into after you graduate. When looking for your first role, you could find yourself as a:

- Software Developer
- Software Testing Engineer
- Java Developer
- Junior Developer

With a strong range of programming languages under your belt, you could apply yourself to many rewarding roles.

Apply

ehu.ac.uk/ll33

or scan the QR code.

How to apply

Apply Full-Time

Read our guide to applying through UCAS to find out more about the application process.

International

Please see our international student pages for further information about how to apply as a prospective international student.

Should you accept an offer of a place to study with us and formally enrol as a student, you will be subject to the provisions of the regulations, rules, codes, conditions and policies which apply to our students. These are available at www.edgehill.ac.uk/studentterms.

Contact us

Course Enquiries Team

Tel: 01695 657000

Email: study@edgehill.ac.uk

For changes to course content, course titles and entry requirements, please visit: ehu.ac.uk/coursechanges For the most up-to-date course information please visit: ehu.ac.uk/undergraduate Applicants are advised to contact the University for further details of any changes.

We make every effort to ensure the accuracy of our published course information. However, our courses are subject to ongoing review and development. Changing circumstances may mean we have to alter or cancel programmes or courses. Changes may be necessary to comply with the requirements of professional, regulatory, statutory or accrediting bodies; changes to subject benchmark statements; to keep courses contemporary through updating practices or areas of study; or as a result of feedback from students. We reserve the right to make variations if we consider such action to be necessary or in the best interests of students. You can access the latest information on courses on our website: ehu.ac.uk/undergraduate

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