



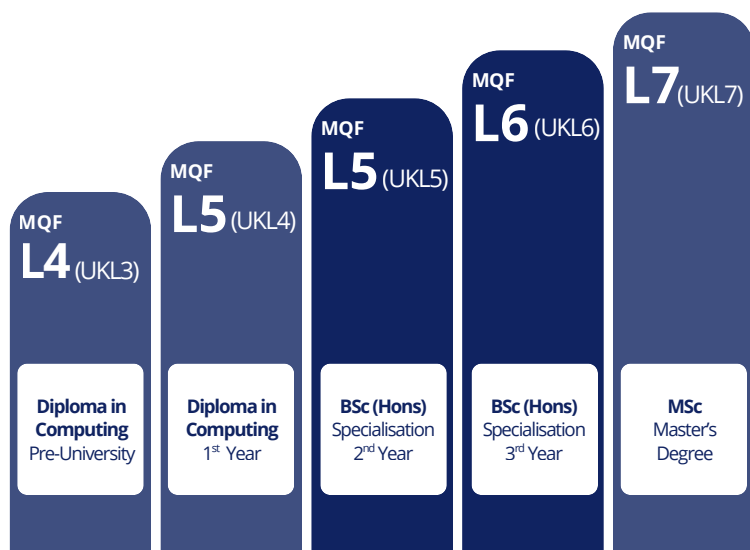
# BSc (Hons) Computer Science

Year 2 & 3 of the Degree

The course aims to produce software developers who can seamlessly make the transition from University to the international computer industry. This is achieved by providing a thorough grounding in the core principles of computer science and integrating these with computer languages, tools, techniques and methodologies used by computer professionals worldwide.

The Computer Science degree will enable you to demonstrate a knowledge and understanding of the essential facts, concepts, principles, theories and practices relating to Computer Science. The holistic approach of this programme means that students will learn how to make the best use of the appropriate tools and methodologies to the design, implementation and evaluation of software systems on a variety of platforms and environments.

In addition students will be given the opportunity to develop a range of transferable skills in areas such as problem solving, communication, project management, working individually and in teams as well as the ability to gather, synthesise, evaluate and reflect on information from relevant sources.



## BSc (Hons) Computer Science

UK L5 & 6 - MQF L5 & 6

### Credits

240 CATS - 120 ECTS

### Awarding Body

University of Wolverhampton



### Study Mode & Duration

Full-Time: One academic year per level

Part-Time: Two academic years per level

### Assessments

Examinations and coursework assignments

### Entry Requirements

Level 4 Computing Award such as:

- Higher National Certificate Computing
- NCC Diploma in Computing

AND English Language Qualification

Relevant work experience is considered





## Second Year

### Algorithms and Concurrency

Enhance your understanding of algorithms and data structures while learning to design concurrent programs. Explore multi-threading, common issues like deadlocks and race conditions, and analyse performance to write more efficient, parallel software.

### Collaborative Development

Work in a development team to build a software artefact, collaborating with students across disciplines. Learn about team roles, documentation, project management, and secure development practices in a real-world, multi-programme environment.

### Full Stack Development

Learn to build both front-end and back-end systems using modern web technologies. Create secure, dynamic websites through hands-on practice in server-side scripting, databases, and interface design.

### Object Oriented Design and Programming

Explore core object-oriented principles using Java. Develop your skills in version control, testing, and system modelling while building secure, scalable software using proven design methodologies.

### Cloud Systems

Learn the foundations of cloud computing by developing and deploying scalable applications to cloud platforms. Gain hands-on experience with cloud tools and understand deployment strategies.

### Data Mining

Explore the data mining process using real-world datasets. Learn techniques for processing and analysing diverse data types, uncovering patterns and insights using modern tools and technologies.

## Third Year

### Big Data

Build on your knowledge of high-performance computing and databases to explore distributed systems and big data management. Learn current techniques and technologies used to process, store, and analyse large-scale datasets in today's data-driven environments.

### Advanced Full Stack Development

This module builds on your full-stack development journey from the second year by providing an in depth understanding of full-stack web application development and emphasises the importance of architectural patterns and Service Oriented Architectures in full-stack Web Development.

### Mobile Application Design and Development

This module focuses on the design, implementation, and testing of applications for mobile environments. It gives you a good understanding of the issues, tools, techniques, and technologies involved. It also gives you approaches to handling these issues, and the skills necessary in developing for contemporary mobile computing platforms

### Artificial Intelligence and Machine Learning

Gain practical experience in maintaining and extending existing systems. Learn reverse engineering, testing, refactoring, and design patterns. Explore emerging technologies such as Domain Specific Languages or Quantum Computing through focused, real-world development scenarios.

### Project and Professionalism

Develop professional skills and ethical awareness aligned with industry standards. Propose and deliver your final year project with support from a dedicated mentor. Build independent research, planning, and development skills through continuous feedback and assessment.