



**STAFFORDSHIRE
UNIVERSITY**

**UCAS Code:
G600/G609**

BSc(Hons)/BEng(Hons) Software Engineering

**UNDERGRADUATE
COURSE INFORMATION**

Key Facts

Faculty of Computing,
Engineering and
Technology

Location:
Stafford Campus

Duration:
3 years full-time
4 years with placement
year

Entry requirements:
Typical offer: 240 UCAS
points.
A levels: CCC or CDD
plus C at AS.
BTEC: MMM.
All applicants are
individually assessed.
Detailed entry
requirements can be
found on each of our
online course pages or by
visiting [www.staffs.ac.uk/
ugentryrequirements](http://www.staffs.ac.uk/ugentryrequirements)

Accredited by:
BCS and IMIS



Available as a Top-up
from HND

At-a-glance

Software engineers develop programs in all areas of the computing industry – from business systems to computer games to embedded systems. Typical job titles of recent graduates include Application Programmer, Software Engineer and Systems Developer.

Software Engineering focuses on creating software to solve real-world problems. A software engineer analyses problems, identifies innovative solutions, and creates and tests well-engineered software systems to implement the solutions. On this course, you will learn many of the tools, techniques, and programming languages that a software engineer employs within the context of professionally-managed software development projects.

This course begins by laying a solid foundation in general computing and Software Engineering. You will begin to build expertise in Software Engineering by studying: procedural and object-oriented programming (Java, C, C++, C#); algorithms and data structures; systems modelling; mathematics; operating systems; and the management of software development projects.

Students on the sandwich degree spend their third year on work placement, applying their knowledge and gaining invaluable, relevant experience.

The final year, by study and practice, will enhance your expertise in programming, algorithm design, and project management. You can also explore design patterns, real-time systems, safety-critical systems, and enterprise applications.

In a substantial project of your choice, which you plan, manage, and conduct, you demonstrate your professional expertise in Software Engineering.

Course Outline

Year 1

- Introduction to Software Development
 - Hardware and Software Systems and Graphics
 - Maths and Statistics for Computing Students
 - Object Oriented and Event Driven Programming
 - Algorithms and Data Structures in C
 - Systems Modelling
 - Introduction to Operating Systems
- Option modules include:
- Introduction to Computer Games Programming
 - Networking with LANs and WANs
 - Computer Security and Forensics
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Year 2

- Professional and Enterprise Development
 - Database Systems
 - Further Object Oriented Programming
 - Further Programming Concepts in C++
 - Principles and Practices of Software Production
 - Software Engineering and Systems Intergration
- Option modules include:
- Software Development for Mobile Computing Applications
 - Computer Systems – Low Level Techniques
 - Concurrent Programming in C#
 - Network and Grid Computing
 - Graphical User Interfaces
 - Web Programming
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Optional placement year

Year 3

- Individual Project
 - Algorithmics
 - Design Patterns
- Option modules include:
- Information Systems Engineering in Industry (Core for BEng(Hons) award)
 - Safety Critical and Embedded Systems
 - Real-time Systems
 - Enterprise Applications with Java Enterprise Edition
 - Advanced Programming Language Concepts
 - Project Management



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WHY STUDY AT STAFFORDSHIRE UNIVERSITY?

We have a reputation for preparing students to take on the world. Our courses deliver the skills and experiences employers value. Our lecturers know what it is you need to succeed in business because they're industry professionals. What we teach is not only quality assured but informed by the latest thinking and developments in the real world. And with excellent facilities, a lively social scene, and low cost of living, Staffordshire University is a great place to be a student.

The information in this leaflet is correct at the time of publication, but may be subject to change.

For the latest information visit www.staffs.ac.uk/undergraduate or call our enquiries team on 01782 294400.

Detailed entry requirements can be found on each of our online course pages or by visiting www.staffs.ac.uk/ugentryrequirements

For full, up-to-date details of our degrees and other courses, visit: www.staffs.ac.uk/undergraduate

For lots of friendly help and advice:
Call: 01782 294400
Email: enquiries@staffs.ac.uk

■ CREATE THE DIFFERENCE