COMPUTING SCIENCE
BSc (Hons)

SOFTWARE ENGINEERING
BSc (Hons)

BUSINESS COMPUTING
BSc (Hons)

ARE YOU STIRLING?
WHY STUDY COMPUTING SCIENCE?

Computers are everywhere. Not just the obvious home and office computers, but in every aspect of modern life: smart phones, smart microwaves, games consoles, automatic cash dispensers and air traffic control systems. Our course teaches you the theory and practice of designing, building and analysing such systems, with your training encompassing how computers work and learning how they fit into their environment.

The 2017 National Student Survey placed Computing Science at Stirling second in Scotland.

COURSE DETAILS

Computing Science courses at Stirling equip you with knowledge of the wide use of computers in business, industry and for personal use. Built around a core of software engineering and development you will learn about Artificial Intelligence, Computer Games and Mobile Phone App development.

From day one you will study the broad concerns of computing science: not only how to program computers but ‘computational thinking’, the usability and accessibility of user interfaces, and social and professional issues.

In your Honours year you will have the chance to pick a number of optional topics, which are regularly updated to be at the cutting edge of computing. These options are often related to research being done at Stirling. Current topics include Computer Security and Forensics, Web Services, Computing and the Brain, Modelling for Complex Systems.

You will learn about Computing Science through lectures, small tutorial groups and “hands-on” experiments through laboratory work. Computing Science is taught as a very practical subject and almost all modules include practical assignments as part of their assessment.

Honours students undertake an independent project in their final year. Typically this involves developing a major piece of software from initial requirements to final delivery. Recent projects included:

• Autonomous Aerial Exploration using a Drone
• Using Machine Learning for Image Classification
• Producing Reactive Music
• Procedurally Generating 3D Worlds
• Developing a Preventative Diabetes Type 2 Predictor

REASONS TO CHOOSE THIS COURSE

1 PROBLEM ORIENTED APPROACH
Our programmes are designed according to a practical, problem solving approach. Students are taught how to design effective solutions to complex problems.

2 INDUSTRIAL EXPERIENCE
We provide opportunities for our students to develop strong professional skills through industrial placements with local SMEs and large multi-nationals.

3 ADVANCED TECHNOLOGIES
Our programmes are grounded on the latest developments in technology, from cyber-security to data analytics, drawing on the expertise of internationally active staff.
CAREER OPPORTUNITIES
The University of Stirling is 3rd in the UK and 1st in Scotland for graduate employability, with almost 96% of our graduates in employment or further study within six months of graduating (HESA 2016).

This degree will place you at the forefront of computing in a web-based world. Our industrial placements will equip you with work experience that will facilitate entering the job market. Our graduates are well-equipped to enter either the software industry itself or one of the many fields in which computer systems are extensively used and developed.

Recent employment destinations for our graduates include Adobe Systems Inc, Agilent (Hewlett Packard Ltd), British Telecom, Google, HSBC, KANA, Logica, Microsoft, Scottish Power, Silicon Graphics Inc, Yammer (owned by Microsoft).

Our graduates have also found employment as:
- IT Management Consultancy
- Information Systems manager
- Software Development and Testing
- Systems Developer
- Systems Administration
- Web Developer
- Cybersecurity
- Database Administrator
- Games Developer
- Multimedia Programmer

“The Computing Science course at Stirling offers a healthy challenge along with the freedom to choose between a wide variety of subjects. The teaching staff are highly knowledgeable and the relationships between teachers and students are friendly and informal, lecturers do not hesitate to give their time to students willing to put in the work. A great course. Rewarding, varied and fun.”
Cory Stone,
2017 Computing Science Graduate

“My time at the University of Stirling has definitely prepared me for a career in IT. If you aren’t an excellent problem solver then you will be by the time you leave!

Much of the knowledge I gained from modules studied at Stirling is now being put to use daily to provide bespoke software solutions for clients. I’d say the best part of studying at Stirling is the availability of lecturers. When I struggled to understand areas of the course there was always an open door and someone inside willing to help.”
Marc Mcauley,
BSc Computing Science, now a Software Engineer with KANA

COMPUTING SCIENCE G400 stir.ac.uk/3y
SOFTWARE ENGINEERING G600 stir.ac.uk/51
BUSINESS COMPUTING G510 stir.ac.uk/3v

MINIMUM REQUIREMENTS
YEAR 1 ENTRY – FOUR-YEAR HONOURS
SQA Highers: ABBB – one sitting AABB – two sittings
GCE A-levels: BBB
IB Diploma: 32
BTEC (Level 3): DDM

YEAR 2 ENTRY – THREE-YEAR HONOURS
SQA Adv Highers: ABB
GCE A-levels: ABB
IB Diploma: 35

Essential subjects: To include Computing and Business Studies/Management (for Business Computing) and relevant experience of Java or other programming languages.

OTHER QUALIFICATIONS
Scottish HNC/HND: Minimum entry: Bs in graded units.
Advanced entry: Please visit: stir.ac.uk/ay
Access courses and other UK/EU and international qualifications are also welcomed.

ADDITIONAL INFORMATION
General entry requirements apply. Please visit: stir.ac.uk/av

PART TIME, ADVANCED ENTRY AND STUDY ABROAD OPTIONS AVAILABLE
### BUSINESS COMPUTING

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<thead>
<tr>
<th>YEAR</th>
<th>SEMESTER</th>
<th>MODULE 1</th>
<th>MODULE 2</th>
<th>MODULE 3</th>
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<tbody>
<tr>
<td>1</td>
<td>1</td>
<td>The Global Business Environment: An Introduction</td>
<td>Introduction to Computing Science</td>
<td>Any module</td>
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<td>2</td>
<td>The Management Challenge: An Introduction</td>
<td>Programming and User Interface Design</td>
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<td>3</td>
<td>Fundamentals of Business and Management</td>
<td>Data Structures, Objects and Algorithms</td>
<td>Database Principles and Applications</td>
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<td>4</td>
<td>The Organisation of Business</td>
<td>Programming Language Paradigms</td>
<td>Managing Information</td>
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<tr>
<td>3</td>
<td>5</td>
<td>International Business</td>
<td>Multimedia and HCI</td>
<td>Software Engineering I</td>
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<td></td>
<td>6</td>
<td>Responsible Business or Entrepreneurship</td>
<td>Information Systems</td>
<td>Computer Games Development or Software Engineering II</td>
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<td>4</td>
<td>7</td>
<td>Honours project</td>
<td>Computer Security and Networks</td>
<td>Autumn electives</td>
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<td>8</td>
<td>Honours project</td>
<td>Honours project</td>
<td>Spring electives</td>
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### COMPUTING SCIENCE - SOFTWARE ENGINEERING

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<tr>
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<td>1</td>
<td>Introduction to Computing Science</td>
<td>Discrete Structures</td>
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<td>2</td>
<td>Programming and User Interface Design</td>
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<td>Data Structures, Objects and Algorithms</td>
<td>Database Principles and Applications</td>
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<td>Systems</td>
<td>Managing Information</td>
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<td>5</td>
<td>Software Engineering I</td>
<td>Operating Systems Concurrency and Distribution</td>
<td>Multimedia and HCI</td>
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<td>Software Engineering II</td>
<td>Computer Games Development</td>
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#### 4TH YEAR ELECTIVES:

Technologies for e-commerce, Artificial Intelligence, NoSQL Databases, Telecommunications Systems and Services, Modelling for Complex Systems, Web Services

### CONTACT

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stir.ac.uk/65

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05/19