SOFTWARE DEVELOPMENT WITH CYBER SECURITY
BSc (Hons)

ARE YOU STIRLING?
WHY STUDY SOFTWARE DEVELOPMENT WITH CYBER SECURITY?

The BSc (Hons) in Software Development with Cyber Security is a highly practical degree developed in partnership with the Scottish ICT industry who are looking for about 12,800 new staff to join the workforce every year. Jobs in the sector offer both a wide variety of career opportunities and above average compensation.

In 2016, the average annual salary for digital technology jobs was £37,500, 30% higher than the Scottish average of £28,000. (Scotland IS Survey 2019)

INLCUDES A THREE-MONTH WORK PLACEMENT

COURSE DETAILS

Students will spend the first two years of this four-year course at the college following an enhanced Software Development HND curriculum.

During this time students will develop a range of specialist technical software development skills and knowledge in programming and systems development. Students will gain academic, technical and professional training leading to the skills necessary to design, implement, support, evaluate or manage IT systems in a vast range of industries.

In Years 3 and 4 two key components of the course are the industrial placement and the Honours project.

Students will undertake a compulsory three-month industrial work placement in the summer following the third academic year. This work placement will appear on the academic transcript.

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.

Much of the focus of the four year degree course is on software development with particular emphasis on the development of analytical skills.

During Year 2 at the college students will take a University module to support the transition across different learning environments.

AN INTEGRATED APPROACH:

Throughout the four years there will be an integrated approach to teaching. Academics from the College and the University will work together, alongside employers, to deliver the most up-to-date and industry relevant curriculum.

All undergraduates of this course will have dual student status and be fully enrolled within Forth Valley College and the University of Stirling.

REASONS TO CHOOSE THIS COURSE

1 KEY SKILLS

Students on this programme will be equipped with key skills in software and web development.

2 INDUSTRIAL PLACEMENT

A core industrial placement, together with an independent honours project dissertation, makes our graduates uniquely experienced in industrial practices and academic rigour.

3 DUAL STATUS

All students on this course will have dual student status and be fully enrolled within Forth Valley College and the University of Stirling.
WHY CHOOSE STIRLING?

A shared learning approach between a Further and Higher Education College and University is one of the key attributes of this degree.

Delivery of enhanced technical skills will make graduates work-ready – a major strength of the Software Development with Cyber Security degree course.

An industrial placement, together with an independent research dissertation, makes our graduates uniquely experienced in fundamental research with industrial awareness.

Research-led teaching is the key to deep learning and understanding.

Many students work closely with academics throughout their time and benefit from actively participating in research programmes.

This approach, together with industrial placements, enables students to apply the skills that they develop to 21st Century ICT careers. Forth Valley College’s STEM provision is amongst the strongest and most comprehensive to be found at any college across the UK. The College has a strong strategic commitment to STEM and close links with industry in order to deliver the skills required by employers through innovative provision.

There is an emphasis on practical skills and simulated learning in industry standard facilities to ensure learners are ‘work ready’ upon progressing to employment.

“The knowledge and skills taught in educational programmes must reflect those currently in use in the industry to ensure employability for students. Consequently, the input of businesses is necessary to ensure that they contain relevant material to the industry.”

Ross Tuffee
MD and Co-Founder, DOGFI.SH Mobile Ltd

SOFTWARE DEVELOPMENT WITH CYBER SECURITY

stir.ac.uk/nd T5G6

MINIMUM REQUIREMENTS

FOUR-YEAR HONOURS

SQA Highers:
BBB

GCE A-levels:
BB

IB Diploma:
28

Essential subjects:
To include one of Chemistry, Computing, Mathematics or Physics.
Access courses and other UK/EU and international qualifications are also welcomed.

ADDITIONAL INFORMATION

General entry requirements apply. Please visit:
stir.ac.uk/av
Please note that selection will be made via successful interview.

PART TIME, AND STUDY ABROAD OPTIONS AVAILABLE

CAREER OPPORTUNITIES

A major skills gap exists in Scotland’s Computing Sector and about 12,800 job opportunities will be available each year. This trend is confirmed by the latest ScotlandIS survey (2019) stating that ‘Demand for the recruitment of university graduates remains strong with 70% of all businesses reporting they are definitely or quite likely to recruit graduates in 2019.’ This course gives you the necessary qualification and practical experience to excel in this field.
## TYPICAL TIMETABLE

<table>
<thead>
<tr>
<th>YEAR 1</th>
<th>YEAR 2</th>
<th>YEAR 3</th>
<th>YEAR 4</th>
</tr>
</thead>
<tbody>
<tr>
<td>Computer Systems Fundamentals</td>
<td>Software Development - OOP</td>
<td>Software Engineering I Multimedia and Human Computer Interaction</td>
<td>Honours project (compulsory)</td>
</tr>
<tr>
<td>Developing Software: Introduction</td>
<td>Systems Development - Object Oriented Analysis &amp; Design</td>
<td>Software Engineering II Computer Game Technologies</td>
<td>Big Optimisation Spaces</td>
</tr>
<tr>
<td>Troubleshooting Computing Problems</td>
<td>Developing Mobile Web Based Applications: an Introduction</td>
<td>Information Systems</td>
<td>NoSQL Databases</td>
</tr>
<tr>
<td>Professionalism and Ethics in Computing</td>
<td>Software Development: Developing Websites for Multiplatform Use</td>
<td>Industrial Work Placement (compulsory)</td>
<td>Technologies for eCommerce</td>
</tr>
<tr>
<td>Mathematics: Calculus and Matrices for Computing</td>
<td>Graded Unit 2</td>
<td>Operating Systems, Concurrency and Distribution</td>
<td>Artificial Intelligence</td>
</tr>
<tr>
<td>Software Development: Programming Foundations</td>
<td>Software Development - Data Structures</td>
<td></td>
<td>Telecommunications Systems and Services</td>
</tr>
<tr>
<td>Computing: Introduction to Project Management</td>
<td>Relational Database Management Systems</td>
<td></td>
<td>Web Services</td>
</tr>
<tr>
<td>Team Working in Computing</td>
<td></td>
<td></td>
<td>Modelling for Complex Systems</td>
</tr>
<tr>
<td>HNC Computing: Graded Unit 1 (Exam)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>SQL: Introduction</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Software Development: Developing Small Scale Standalone Applications</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Computer Forensics Introduction</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Multi User Operating Systems</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

---

## CONTACT

**Vivien Gallacher, Curriculum Manager**  
Forth Valley College  
T: 01324 403158  
E: vivien.gallacher@forthvalley.ac.uk  
W: forthvalley.ac.uk/twogether

**Dr Mario Kolberg, Course Director**  
Computing Science and Mathematics  
University of Stirling  
T: 01786 46 7440  
E: mko@cs.stir.ac.uk Student

**Recruitment and Admissions**  
T: +44 (0) 1786 467046  
E: recruitment@stir.ac.uk

**stir.ac.uk/65**

## ARE YOU STIRLING?

---

09/19