

Undergraduate Programme Specification

BSc (Hons) Software Development

This specification provides a summary of the main features of the programme and learning outcomes that a student might reasonably be expected to achieve and demonstrate where full advantage is taken of all learning opportunities offered. Further details on the learning, teaching and assessment approach for the programme and modules can be accessed on the University website and Virtual Learning Environment, GCU Learn. All programmes of the University are subject to the University's [Quality Assurance](#) processes.

GENERAL INFORMATION			
Programme Title	BSc (Hons) Software Development		
Final Award	BSc (Hons) Software Development		
Awarding Body	Glasgow Caledonian University		
School	School of Computing, Engineering and Built Environment		
Department	Computing		
Mode of Study	Full-time		
Location of Delivery	Glasgow Campus		
UCAS Code			
Accreditations (PSRB)			
Period of Approval	From:	September 2023	To: August 2028

EDUCATIONAL AIMS OF PROGRAMME
<p>GENERAL INTRODUCTION</p> <p>The BSc/BSc (Hons) Software Development programme has been developed to provide students with the knowledge, understanding and skills needed to become effective Software Development professionals capable of working on the development of the software systems required by modern industry. Software professional roles are currently among the fastest-growing in the ICT sector. This has led to an increased demand for employable and productive software engineering graduates. Over the past 5 to 10 years the computing industry has experienced a "once every 20–25 years" shift to a new computing technology platform, bringing growth and innovation, which has been called the "Third Platform". The Third Platform has at its core the four pillars of Big Data & Analytics, Cloud (evolving to Cloud 2.0), Mobile Computing and Social Technologies which come together and create opportunities for innovation. The Software Development programme is aligned with this "Third Platform" since it incorporates in its programme outcomes coverage of the four pillars. The programme provides a specialised route for students who wish to become technical experts in the field of software development. The programme offers a 2 + 2 pathway.</p> <p>The broad educational aims of this programme are:</p> <ul style="list-style-type: none"> To provide students with a specific understanding of the theories, concepts, processes, methods and tools used for software development, and their application to the development of solutions that have real value.

- To provide students with expert knowledge of the entire software development life cycle.
- To equip students with a range of theoretical and practical skills relevant to the task of developing and evaluating robust software solutions to real world problems.
- To enable students to develop a cultural understanding of the context of software applications.
- To equip students with the ability to work as an individual and as part of a team to develop and deliver quality software solutions.
- To enable students to acquire good analytical, synthesis and communication skills.
- To enable students to take responsibility for their own learning as they progress through the programme.
- To assist the student in developing the skills required in adapting to changing technological and organisational developments and learning new skills.
- To provide education and training which is accredited by the BCS

Expected Levels of Attainment

- On successful completion of year 1 a student should have a basic knowledge of the software and hardware concepts which underpin modern computing systems.
- On successful completion of year 2 a student should have a sound knowledge of software design and development and show competence in applying this to a range of software development domains.
- On successful completion of year 3 a student should be able to plan, specify, design, implement and support components of a software system in response to a business need in accordance with fundamental principles and methods, using appropriate techniques and tools.
- On successful completion of year 4 (honours) a student will, in addition, be able to critically evaluate alternative approaches to software solutions and be able to use advanced knowledge and techniques in the construction of a software solution.

PROGRAMME STRUCTURE AND AVAILABLE AND FINAL EXIT AWARDS¹

The following modules are delivered as part of this programme:

Module Code	Module Title	Core or Optional	SCQF Level	Credit Size	Coursework %	Examination %	Practical %
M1I325623	Fundamentals of Computer Systems	Core	7	10	100%		
M1I326709	Fundamentals of Software Engineering	Core	7	20	100%		
M1I326719	Programming 0	Core	7	20	100%		
M1I325851	Maths for Computing	Core	7	20	40%	60%	
M1I325624	Fundamentals of Network and Cloud Computing	Core	7	10	100%		
M1I325625	Database Development	Core	7	20	100%		
M1I326724	Practical Computing	Core	7	20	100%		
M2I326721	Programming 1	Core	8	20	100%		
M2I322952	Object Oriented Analysis & Design	Core	8	20	100%		
M2I625666	Human Computer Interaction	Core	8	20	100%		
M2I326729	Programming 2	Core	8	20	100%		
M2I326713	Web Application Development 1	Core	8	20	100%		
M2I226701	Software Processes and Practices	Core	8	20	100%		
M3I325687	DevOps	Core	9	20	100%		
M3W226703	Group Project	Core	9	20	100%		
M3I326697	Introduction to Data Science	Core	9	20	100%		
M3I326184	Research Skills & Professional Issues	Core	9	20	100%		
M3I326696	Programming 3 (DS & A/AP)	Core	9	20	100%		
M3I325640	Web Application Development 2	Core	9	20	100%		
MHW225671	Honours Project	Core	10	40	100%		
MHI226694	Big Data and IoT	Core	10	20	100%		
MHI326841	Mobile Platform Development	Core	10	20	100%		
MHI326725	Cloud Platform Development	Core	10	20	50%	50%	
MHI226693	Information Security	Core	10	20	50%	50%	

¹ Periodically, programmes and modules may be subject to change or cancellation. Further information on this can be found on the GCU website here: www.gcu.ac.uk/currentstudents/essentials/policiesandprocedures/changesandcancellationtoprogrammes

Students undertaking the programme on a full-time basis commencing in September of each year will undertake the modules in the order presented above. This may be subject to variation for students commencing the programme at other times of year (e.g. January) and/or undertaking the programme on a part-time or distance learning mode of delivery.

The following final and early Exit Awards are available from this programme²:

Certificate of Higher Education in Computing - *achieved upon successful completion of 120 credits*

Diploma of Higher Education in Computing - *achieved upon successful completion of 240 credits*

Bachelor of Science in Software Development - *achieved upon successful completion of 360 credits*

Bachelor of Science with Honours in Software Development - *achieved upon successful completion of 480 credits*

Industrial Placement Year (Optional) Exit Award

Students opting to undertake placement do so in the academic session after level 3 studies. Assessment is via the additional 60 SCQF credit level 9 module, M31323077 Industrial Placement. Successful completion of that module gives (Sandwich) in the final exit award obtained by the student. Students to follow the 2+2 pathway also have this option.

ASSESSMENT REGULATIONS

Students should expect to complete their programme of study under the GCU Assessment Regulations that were in place at the commencement of their studies on that programme, unless proposed changes to University Regulations are advantageous to students. These can be found at:

www.gcu.ac.uk/aboutgcu/supportservices/qualityassuranceandenhancement/regulationsandpolicies

In addition to the GCU Assessment Regulations noted above, this programme is subject to Programme Specific Regulations in line with the following approved Exceptions:

Case No:

Details: **Exception to Undergraduate Assessment Regulations, Sub-sections 19.4; 19.7.1; 19.8.2 Classification of Honours Award:** *that the Level 3 Industrial Placement module is excluded from the Honours Classification Calculation Set.*

² Please refer to the [GCU Qualifications Framework](#) for the minimum credits required for each level of award and the Programme Handbook for requirements on any specified or prohibited module combinations for each award.