

PROGRAMME SPECIFICATION (Undergraduate) 2025-26		
1	Awarding Institution	Newcastle University
2	Teaching Institution	Newcastle University
3	Final Award	BSc (Hons)
4	Programme Title	Computer Science G400 Computer Science with Industrial Placement G401 Computer Science with Industrial Placement 1946U Computer Science with International Study Year 1898U Computer Science (Game Engineering) G450 Computer Science with Industrial Placement (Game Engineering), G451 Computer Science (Software Engineering) G600 Computer Science with Industrial Placement (Software Engineering), G603 Computer Science (Cyber Security), I195 Computer Science with Industrial Placement (Cyber Security) I196 Computer Science with International Study Year (Cyber Security) 1992U
5	UCAS/Programme Code	As above
6	Programme Accreditation	(G400, G401, G450, G451, G600, G603, I195, I196 only) – BCS, The Chartered Institute for IT
7	QAA Subject Benchmark(s)	Computing
8	FHEQ Level	6
9	Last updated	September 2025
10 Programme Aims		
To develop graduates who can evidence their ability to engineer new and existing software systems and adapt to changes in the computing field. They will be able to apply relevant theory to the solution of practical problems and to the analysis of existing tools and techniques. 1 To provide a flexible structure that allows students to follow a general programme in Computer Science, or to specialise. 2 To provide a programme, informed by industry needs, that equips students with subject-specific and transferable skills that will enable them to pursue a variety of careers. 3 To provide a programme which meets the accreditation requirements of appropriate professional bodies, thus providing the basis for further professional development and lifelong learning. 4 To provide students with the opportunity to develop their skills within an industrial setting.		
5. Learning Outcomes		
The programme provides opportunities for students to develop and demonstrate knowledge and understanding, qualities, skills, and other attributes in the following areas. The programme outcomes have references to the benchmark statements.		
Knowledge and Understanding		

On completing the programme students will have gained and be able to demonstrate competency in: - A1 a diverse range of programming paradigms and languages supported by programming language principles. - A2 the principles of software engineering. - A3 the theoretical and mathematical foundations of Computer Science. - A4 techniques for the development of data representations and algorithms - A5 computer and network organisation and hardware architecture - A6 the legal, ethical, and social aspects of professional practice, personal development, social roles, and effects of computing systems - A7 research techniques. - A8 operating effectively in teams. - A9 the principles of cybersecurity.
Teaching and Learning Methods
Lectures are the main way of imparting knowledge and understanding (A1-A9), but tutorials are also used. Practical classes feature prominently, especially to support the Stage 1 programming modules (A1, A2). Visiting speakers provide seminars on aspects of being an IT professional (A6). Students are expected to contribute to their own learning experience by independent reading. They are provided with references to books which are categorised as essential, recommended, or background reading, as well as scientific papers and other learning materials including appropriate web URLs. In addition, when taken, an industrial placement will involve the development of knowledge within an industrial setting.
Assessment Strategy
Knowledge and understanding are assessed by means of closed and open book written examinations, and coursework, including team and individual project reports and log books (A1-A9).
Intellectual Skills
On completing the programme students will have demonstrated skills in the areas of: - B1 carrying out the process of software development, including: the analysis of requirements; the production of specifications; and robust, reliable, and secure software. - B2 several programming languages and paradigms. - B3 designing useful and usable software. - B4 applying theoretical concepts in the design and analysis of software.
Teaching and Learning Methods
B1-B4 feature prominently in all modules. In particular a team project at Stage 2 gives students experience of working with others (see D7 below) to engineer a complex piece of software (B2, B4). When taken, the industrial placement will require students to produce solutions to a customer's requirements (B1-B4). In many cases the industrial placement when taken, and an individual project at Stage 3 will require students to develop a large piece of software to a customer's requirements (B1, B2, B4). In all other modules, coursework is used to develop these skills (B1-B4).
Assessment Strategy
Subject-specific and professional skills are assessed by coursework (B1-B4).
Practical Skills
On completing the programme students will be able to demonstrate they have the skills to: - C1 conduct investigations using the technical and professional literature. - C2 use tools and techniques to support software development especially in teams. - C3 address problems using theoretical analysis and empirical evaluation. - C4 interacting with people to capture requirements and communicate the results. - C5 produce technical documentation.

Teaching and Learning Methods
All modules involve coursework, much of which involves problem solving skills (C4). This is especially so in the team and individual projects, and, when taken, the industrial placement, where students need to select, evaluate, and apply appropriate tools and techniques (C2). Here and elsewhere students will need to investigate possible alternatives in the technical and professional literature (C1, C3).

Assessment Strategy
Practical skills are assessed by a range of coursework (reports, design documents, etc.) (C1-C5).
Transferable/Key Skills
On completing the programme students will be able to demonstrate competency in: D1 effective communication skills. D2 problem solving. D3 initiative. D4 adaptability. D5 teamwork. D6 numeracy. D7 planning and organisation.

Teaching and Learning Methods
Key skills feature throughout the programme; teamwork in the Stage 2 team project and when taken, the industrial placement (D7); oral presentation, interpersonal communication, and planning and organisation in the final year research methods and individual project modules, as well as the Stage 2 team project and when taken, the industrial placement (D3, D5); written communication in all modules, but especially in the team and final year projects and when taken, the industrial placement (D1); numeracy is covered by a Mathematics module at Stage 1 and exercises in the programming modules (D6); problem solving, initiative and adaptability are necessarily covered throughout the programme (D2, D3, D4).
Assessment Strategy
Key (transferable) skills are assessed by both written and oral presentations (D1-D7). When taken, the industrial placement is assessed by the Module Leader with input from an industrial supervisor and on a pass/fail basis. No resit opportunity is available. Students who fail the placement are able to proceed to Stage 3 of the corresponding "without Industry" programme.

6. Programme Curriculum, Structure and Features
Basic structure of the programme
This programme has 3 Stages. Students are required to take 120 credits at each Stage (except during an intercalating year). Students take compulsory modules in each of Stages 1 and 2. The teaching of these modules is split equally across semesters 1 and 2 so that students study 60 credits in each semester. Students taking one of the industrial placement degrees will take an industrial placement year between Stages 2 and 3. A wide range of optional modules is available in semester 1 of Stage 3.

Key features of the programme (including what makes the programme distinctive)
The program provides students with the opportunity to build a portfolio of work across three stages, demonstrating application of key learning outcomes in practical context. Students taking one of the industrial placement degrees will take an industrial placement year between Stages 2 and 3. To gain BCS accreditation students are required to have studied Stages 2 and 3 at the Newcastle campus. Students must have also passed a problem-solving project at the first attempt.

Programme regulations (link to on-line version)
G400 Computer Science, G401/1946U Computer Science with Industrial Placement, 1898U Computer Science with International Study Year G400 G401 G450 Computer Science (Game Engineering) and G451 Computer Science (Game Engineering) with Industrial Placement G450 G451 G600 Computer Science (Software Engineering) and G603 Computer Science (Software Engineering) with Industrial Placement G600 G603 Computer Science (Cyber Security), I195 Computer Science with Industrial Placement (Cyber Security) I196 Computer Science with International Study Year (Cyber Security) 1992U I195 1992U
7. Support for Student Learning
Generic information regarding university provision is available at the following link. Generic Information
8. Methods for evaluating and improving the quality and standards of teaching and learning
Generic information regarding university provision is available at the following link. Generic Information <i>Accreditation reports</i> (G400, G401, G450, G451, G600, G603, I195, I196 only) – BCS, The Chartered Institute for IT <i>Additional mechanisms</i>
9. Regulation of assessment
Generic information regarding university provision is available at the following link. Generic Information
In addition, information relating to the programme is provided in:

The University Prospectus: <http://www.ncl.ac.uk/undergraduate/degrees/#subject>

Degree Programme and University Regulations: [University Regulations | University Regulations | Newcastle University](#)

Please note. This specification provides a concise summary of the main features of the programme and of the learning outcomes that a typical student might reasonably be expected to achieve if she/he takes full advantage of the learning opportunities provided.