COURSE SPECIFICATION

BSc (Honours) Computer Science

Academic Standards, Quality and Partnerships
Department of Student and Academic Administration

July 2018

Course specification for *BSc (Honours) Computer Science*

COURSE SPECIFICATION

Please refer to the Course Specification Guidance Notes for guidance on completing this document.

Course Title	*BSc (Hons) Computer Science*
Final Award	*BSc (Honours)*
Exit Awards	*CertHE, DipHE, BSc, BSc (Hons)*
Course Code / UCAS code (if applicable)	*C0056S / G400*
Mode of study	*full time*
Mode of delivery	*Campus*
Normal length of course	*3 years, 4 years with placement*
Cohort(s) to which this course specification applies	*from September 2020 intake onwards*
Awarding Body	*University of Portsmouth*
Teaching Institution	*University of Portsmouth*
Faculty	*Faculty of Technology*
School/Department/Subject Group	*School of Computing*
School/Department/Subject Group webpage	*www.port.ac.uk/school-of-computing*
Course webpage including entry criteria	www.port.ac.uk/study/courses/bsc-hons-computer-science
Professional and/or Statutory Regulatory Body accreditations	*British Computer Society*
Quality Assurance Agency Framework for Higher Education Qualifications (FHEQ) Level	*level 6*

This course specification provides a summary of the main features of the course, identifies the aims and learning outcomes of the course, the teaching, learning and assessment methods used by teaching staff, and the reference points used to inform the curriculum.

This information is therefore useful to potential students to help them choose the right course of study, to current students on the course and to staff teaching and administering the course.

Further detailed information on the individual modules within the course may be found in the relevant module descriptors and the Course Handbook provided to students on enrolment.

Please refer to the Module Web Search for further information on the course structure and modules.

Educational aims of the course

The Computer Science degree programme aims to equip students to work as professional computer scientists, particularly in environments where in-depth knowledge, critical awareness and competence in computer hardware, software engineering and distributed systems is required in support of creating complex computer-based systems. In addition, and more generally, the course aims to:

● Provide a challenging, stimulating and self-rewarding study environment.
● Provide a framework whereby students' individual interests may be pursued based on choices from a range of options at levels 5 and 6 and through an individual final year project.
● Develop a range of graduate and employability skills by means of opportunities provided within the course modules and in the industrial placement.
● Accommodate student needs in relation to maximising their career potential by enabling them to develop knowledge, understanding and skills in their chosen subject area.
● Provide the opportunity for students to undertake an industrial placement year.
● Provide the opportunity for student to undertake study abroad.
● Provide the opportunity for students to combine their study of Computer Science with initial teacher training.

Course Learning Outcomes and Learning, Teaching and Assessment Strategies

The Quality Assurance Agency for Higher Education (QAA) sets out a national framework of qualification levels, and the associated standards of achievement are found in their Framework for Higher Education Qualifications document.

The Course Learning Outcomes for this course are outlined in the tables below.

A. Knowledge and understanding of:

LO number	Learning outcome	Learning and Teaching methods	Assessment methods
A1	The fundamentals and underlying theory of computer science, computer architectures, programming, operating systems, networks, software systems, database systems, web authoring, infrastructures in the global context	lectures, tutorials, practical classes, independent work	set exercises, coursework, examinations
A2	The theory and practice of requirements analysis, specification and prototyping, implementation, testing, integration, documentation, delivery and maintenance and their roles in software development	lectures, tutorials, practical classes, independent work, group work	set exercises, coursework, group coursework, examinations
A3	The need for creativity in producing novel and robust software	lectures, tutorials, practical classes, independent work	set exercises, coursework, examinations
A4	The need for the efficient as well as effective management of the process of software construction within an ethical framework	lectures, tutorials, practical classes, independent work, group work, project supervision	set exercises, coursework, examinations, group coursework, dissertation

| A5 | Distributed systems, security and the underlying mathematics of computer science including computability and algorithmic complexity | lectures, tutorials, practical classes, independent work | set exercises, coursework, reports, examinations |

B. Cognitive (Intellectual or Thinking) skills, able to:

LO number	Learning outcome	Learning and Teaching methods	Assessment methods
B1	Apply high-level skills of an intellectual, analytical, creative and problem-solving nature.	lectures, tutorials, practical classes, independent work	set exercises, coursework, examinations
B2	Make use of common skills with an ethical and critical awareness, which are necessary and appropriate for a reflective practitioner.	lectures, tutorials, practical classes, independent work	set exercises, coursework, examinations
B3	Demonstrate a critical awareness of the effects upon society of technical and technological development, and a proper sense of professional conduct in relation to society's increased dependence on technology.	lectures, tutorials, practical classes, independent work	set exercises, reports, coursework, examinations
B4	Plan, execute and professionally report on a major final year engineering project.	lectures, project supervision independent work	project artefact, dissertation

C. Practical (Professional or Subject) skills, able to:

LO number	Learning outcome	Learning and Teaching methods	Assessment methods
C1	Select, critically evaluate and create appropriate, effective, robust and productive methods and tools for the successful construction, and timely delivery of valid computer-based systems.	lectures, tutorials, practical classes, independent work	set exercises, coursework, examinations
C2	Use industry standard software and hardware proficiently for specific purposes.	lectures, tutorials, practical classes, independent work	set exercises, coursework
C3	Competently and critically assess, analyse and use current and future technologies in the computing field.	lectures, tutorials, practical classes, independent work	set exercises, coursework, examinations
C4	Apply professional codes of conduct and appreciate the ethical considerations that underpin them.	lectures, tutorials, independent work	set exercises, coursework, examinations, dissertation
C5	Demonstrate experience and productive capability in the placement setting (sandwich degree only).	work-based learning, tutor visits	portfolio

D. Transferrable (Graduate and Employability) skills, able to:

LO number	Learning outcome	Learning and Teaching methods	Assessment methods

D1	Communicate effectively in writing, speaking and in appropriate forms of presentation; read, understand and analyse complex documents related to software products and system requirements.	lectures, tutorials, practical classes, independent work, group work	reports, posters, dissertation, group coursework, presentation
D2	Deal with numerical data and use information technology to efficiently handle such data and simulations of systems for design and testing.	lectures, tutorials, practical classes, independent work	set exercises, coursework, examinations
D3	Assess problem domains and formulate and apply appropriate problem solving strategies as an individual and when working as part of a team.	lectures, tutorials, practical classes, independent work, group work	set exercises, coursework, group coursework, examinations
D4	Build on previous experience in order to enhance personal development.	lectures, tutorials, practical classes, independent work	set exercises, coursework, examinations
D5	Deliver appropriate outcomes in a timely fashion to the standard required by the placement client (sandwich degree only).	work-based learning tutor visits	portfolio

Academic Regulations

The current University of Portsmouth Academic Regulations will apply to this course.

Support for Student Learning

The University of Portsmouth provides a comprehensive range of support services for students throughout their course, details of which are available at the MyPort student portal.

In addition to these University support services this course also provides:

- Several general-purpose computer laboratories and special-purpose laboratories including a Networking Lab, High Performance Computing Lab, Big Data Lab and Human Computer Interaction Lab.

- Flexible teaching and study facilities including multiple areas ideal for individual and group study.

- A library of devices loanable to students for project work (including smart watches, tablets, sensors, smart-home devices, eye trackers) and lockers of laptops for student loan.

- An induction programme that introduces the student to the University and their course.

- A Course Leader who manages the course and provides students with course-specific advice and guidance.

- A Personal Tutor, responsible for student pastoral support and guidance.

- A Faculty Learning Support Tutor (Computing) who provides additional subject-specific one-to one support.

- A Faculty Student Placement and Employability Centre (SPEC) to support students finding placements, a Placement Co-ordinator to manage placements for Computing students, and a Placement Tutor who visits students whilst on placement and provides additional support.

Evaluation and Enhancement of Standards and Quality in Learning and Teaching

The University of Portsmouth undertakes comprehensive monitoring, review and evaluation of courses within clearly assigned staff responsibilities. Student feedback is a key feature in these evaluations, as represented in our [Policy for Listening to and Responding to the Student Voice](#) where you can also find further information.

Reference Points

The course and outcomes have been developed taking account of:

Insert additional reference points or delete as required

- [University of Portsmouth Curriculum Framework Specification](#)
- [University of Portsmouth Strategy](#)
- [University of Portsmouth Code of Practice for Work-based and Placement Learning](#)
- [Quality Assurance Agency UK Quality Code for Higher Education](#)
- [Quality Assurance Agency Qualification Characteristic Statements](#)
- [Quality Assurance Agency Subject Benchmark Statement](#) for Computing.
- [Quality Assurance Agency Framework for Higher Education Qualifications](#)
- Requirements of Professional and/or Statutory Regulatory Bodies: [British Computer Society](#).
- Vocational and professional experience, scholarship and research expertise of the University of Portsmouth's academic members of staff
- National Occupational Standards

Appendix - Initial Teacher Training (ITT) Pathway

Students on the BSc (Hons) Computer Science programme who are interested in employment as secondary school teachers in Computer Science may request to opt-in to the course's ITT pathway. The ITT pathway combines the core of their degree programme with initial teacher training and school placements. Achievement of the standards for Qualified Teacher Status (QTS) are an essential part of the pathway.

The aims of the pathway are:

- To equip students with a rigorous knowledge and understanding of the core areas of education – professional values and practice, knowledge and understanding and teaching (including planning, expectations and target setting, monitoring and assessment, teaching and class management)
- To enable students to recognise the complex interrelationship between educational theory, policy and practice
- To enable students to apply educational and research based analysis to issues of their personal practice
- To introduce students to conceptual and analytic methods used in educational research and to provide opportunities for the development and application of these tools
- To encourage students to make a substantial contribution to the development of their subject pedagogy during the early years of their career in teaching.

The pathway consists of two modules and four school teaching placements totalling at least 120 days.

The taught modules are: Level 5 M23800 (Computing Undergraduate Ambassador) - 20 credits; Level 6 M26366 (Computer Science Teaching Placement) - 40 credits.

The school placements are as follows: Initial (taster) phase: Semester 2, Level 5 (as part of M23800); Phase 1: June/July half-term following Level 5, approx. 32-37 days; Phase 2: during Level 6 (2 days per week), approx. 50 days; Phase 3: June/July half-term following Level 6, approx. 32-37 days.

Successful completion of the course including the ITT pathway will result in two awards: BSc (Hons) Computer Science, and Qualified Teacher Status (QTS). The University makes an award of a BSc (Hons) degree dependent on a student's results in modules in accordance with the University's academic regulations. The University recommends the award of QTS based on a student's performance in the two ITT modules and on successful completion of at least 120 days of school placement; the National College for Teaching and Leadership (NCTL) awards QTS.

Support for student learning on the ITT pathway:

- The ITT pathway elements of the courses are managed by the Computer Science with ITT Pathway Tutor, based in the School of Education and Childhood studies (SECS), and overseen by the Associate Head (ITT) in SECS.
- Students are supported in school by both a subject mentor and a professional mentor who oversees the progress and well-being of all trainee teachers in their school
- Students have regular timetabled tutorials with the module coordinators of the two ITT modules and with the ITT Pathway Tutor throughout each of the placement periods.

Disclaimer

The University of Portsmouth has checked the information provided in this Course Specification and will endeavour to deliver this course in keeping with this Course Specification. However, changes to the course may sometimes be required arising from annual monitoring, student feedback, and the review and update of modules and courses.

Where this activity leads to significant changes to modules and courses there will be prior consultation with students and others, wherever possible, and the University of Portsmouth will take all reasonable steps to minimise disruption to students.

It is also possible that the University of Portsmouth may not be able to offer a module or course for reasons outside of its control, for example, due to the absence of a member of staff or low student registration numbers. Where this is the case, the University of Portsmouth will endeavour to inform applicants and students as soon as possible, and where appropriate, will facilitate the transfer of affected students to another suitable course.

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