UNIVERSITY OF PORTSMOUTH

COURSE SPECIFICATION

MSc Computer Science

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Course Title	*MSc Computer Science*
Final Award	*MSc*
Exit Awards	*PGCert, PGDip*
Course Code / UCAS code (if applicable)	*P3567FTC*
Mode of study	*Full time*
Mode of delivery	*Campus*
Normal length of course	*1 year (Sep intake) 18 months (Jan intake)*
Cohort(s) to which this course specification applies	*from September 2024 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	*https://www.port.ac.uk/about-us/structure-and-governance/organisational-structure/our-academic-structure/faculty-of-technology/school-of-computing*
Course webpage including entry criteria	*https://www.port.ac.uk/study/courses/postgraduate-taught/msc-computer-science*
Professional and/or Statutory Regulatory Body accreditations	*None*
Quality Assurance Agency Framework for Higher Education Qualifications (FHEQ) Level	*level 7*

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 Course and Module Catalogue for further information on the course structure and modules.

Educational aims of the course

The MSc Computer Science provides an intensive course, covering building on the fundamental principles of basics of programming, databases and algorithm skills, to facilitate a breadth of knowledge and innovative developments across a range of Computer Science areas. Students will gain knowledge of the subject and acquire practical skills and will be given the opportunity to investigate current trends in cutting-edge research areas, for example, Quantum Computing, Artificial Intelligence and Cloud infrastructure

Graduates will have successfully demonstrated:

- Comprehensive knowledge of the discipline and practical skills in application.
- Systematic understanding and critical analysis of state-of-the-art and innovative developments.
- Critical evaluation of current research and research methodologies.

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	Current advanced methods and techniques in data analytics.	*Practical classes and workshops, Lectures*	*Coursework, Presentations*
A2	*Computational problems and how to expose exploitable parallelism.*	*Practical classes and workshops, Lectures*	*Coursework*
A3	*The fundamental concepts of artificial intelligence. The different AI frameworks and the application value of AI and machine learning.*	*Practical classes and workshops, Lectures*	*Coursework*
A4	*The underlying theory of Quantum Computing.*	*Practical classes and workshops,*	*Coursework, presentation, examinations*
A5	*The fundamental concepts of Networking and Cloud Computing*	*lectures*	*Coursework, Examinations*
A6	The need for creativity and scientific rigour in producing novel research and/or robust software solutions	*lectures, seminars, laboratory work,*	set exercises, coursework, 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 MSc 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

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

Academic Regulations

The current University of Portsmouth Academic Regulations: Examination & Assessment Regulations will apply to this course. Approved course exemptions can be found here.

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, Mobile Application Development 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 Engagement Officer (SEO) who is available to give confidential advice and support on a number of different academic and personal issues and signpost you to various support services provided by the university, such as health and disability, financial and housing, academic engagement and performance.

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:

- University of Portsmouth Curriculum Framework Specification
- University of Portsmouth Vision
- Office for Students Conditions of Registration
- 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
- Quality Assurance Agency Framework for Higher Education Qualifications
- Requirements of Professional and/or Statutory Regulatory Bodies
- Vocational and professional experience, scholarship and research expertise of the University of Portsmouth's academic members of staff
- National Occupational Standards

Changes to your course/modules

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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