

## Course Specification

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<b>Status:</b>	Validated

## Core Information

<b>Awarding Body / Institution:</b>	University of Wolverhampton		
<b>School / Institute:</b>	School of Engineering, Computing, and Mathematical Sciences		
<b>Course Code(s):</b>	CS006P01UV CS006P31UV	Full-time Part-time	12 Months 2 Years
<b>UCAS Code:</b>			
<b>Course Title:</b>	MSc Computer Science		
<b>Hierarchy of Awards:</b>	Master of Science Computer Science Postgraduate Diploma Computer Science Postgraduate Certificate Computer Science University Statement of Credit University Statement of Credit		
<b>Language of Study:</b>	English		
<b>Date of DAG approval:</b>	01/Jun/2017		
<b>Last Review:</b>	2015/6		
<b>Course Specification valid from:</b>	2010/1		
<b>Course Specification valid to:</b>	2021/2		

## Academic Staff

<b>Course Leader:</b>	Dr Ian Coulson
<b>Head of Department:</b>	Dr Consolee Mbarushimana

# Course Information

<b>Location of Delivery:</b>	University of Wolverhampton
<b>Category of Partnership:</b>	Not delivered in partnership
<b>Teaching Institution:</b>	University of Wolverhampton
<b>Open / Closed Course:</b>	This course is open to all suitably qualified candidates.

## Entry Requirements:

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Entry requirements are subject to regular review. The entry requirements applicable to a particular academic year will be published on the University website (and externally as appropriate e.g. UCAS

For direct entry onto the Master's programme:

A lower second honours degree in Computer Science or equivalent is required for direct entry onto this Master's programme.

or

A Postgraduate Certificate in Computer Science or a related subject with a minimum of grade C in all modules.

Upon entry students will:

be assessed for their capability to program to a good standard. The inability to meet the required standard will result in the student transferring to the MSc Information Technology degree

For entry onto the Postgraduate Certificate programme

(Completion of which, with a minimum of grade C in all modules, will allow a student to progress to the Master's programme)

A pass at degree level.

Students are selected using application form and references in the first instance and may be invited for interview.

Students applying for individual modules will be required to demonstrate the ability to absorb technical concepts and detail, possibly by way of their previous industrial or commercial experience.

Minimum English competency is the standard MSc entry: IELTS 6.0 or equivalent

## Distinctive Features of the Course:

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This degree builds upon some of the fundamental undergraduate areas to give the students a deep knowledge and understanding in those areas. The course focuses on Distributed and Mobile Computing, Database Server Management, Software Tools, Web Technologies and Group-based Software Development in which the staff are actively researching or have national or international reputations. Specialist laboratories support the teaching, for Networking and Mobile Computing. This award has a strong practical element, enhancing the underpinning knowledge with a range of practical skills designed to enhance the students' career prospects.

## Educational Aims of the Course:

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This course is ideal for students with an undergraduate degree in Computer Science, Engineering or a closely allied field. There is a separate award in Information Technology for students who do not have a strong background in Computer Science. This course will develop a depth of knowledge across several specialised or applied areas of Computer Science. You will be encouraged to independently synthesise information and novel ideas in chosen areas of Computer Science and to evaluate or argue alternative approaches. The course will promote a professional attitude in students wishing to enter employment within the field of Computer Science and enhance the career prospects of all its students.

#### Intakes:

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September

#### Major Source of Funding:

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Office for Students (OFS)

#### Tuition Fees:

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Tuition fees are reviewed on an annual basis. The fees applicable to a particular academic year will be published on the University website.

Year	Status	Mode	Amount
2021/2	H	31	£3275.00
2022/3	H	Full Time	£7995.00
2022/3	Overseas	Full Time	£14450.00
2022/3	H	31	£3998.00
2023/4	H	Full Time	£8395.00
2023/4	Overseas	Full Time	£15450.00
2023/4	H	31	£4198.00
2024/5	H	Full Time	£8815.00
2024/5	Overseas	Full Time	£15950.00
2024/5	H	31	£4408.00

#### PSRB:

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CS006P01UV (Full-time)

Professional Accreditation Body:  
BCS the Chartered Institute for IT

Accrediting Body:  
BCS, the Chartered Institute for IT

Accreditation Statement:  
"Accredited by BCS, the Chartered Institute for IT for the purposes of fully meeting the academic requirement for registration as a Chartered IT Professional."

Approved	Start	Expected End	Renewal
01/Sep/2012	01/Sep/2012	31/Aug/2018	31/Aug/2018

CS006P31UV (Part-time)

Professional Accreditation Body:  
BCS the Chartered Institute for IT

Accrediting Body:  
BCS, the Chartered Institute for IT

Accreditation Statement:  
"Accredited by BCS, the Chartered Institute for IT for the purposes of fully meeting the academic requirement for registration as a Chartered IT Professional."

Approved	Start	Expected End	Renewal
01/Sep/2012	01/Sep/2012	31/Aug/2018	31/Aug/2018

Course Structure:

## January (Full-time)

Part time students study alongside full time students. However, they do not study more than 80 credits in each academic calendar year.

Module	Title	Credits	Period	Type
7CC005	Web Technologies	20	SEM2	Core
7CC012	Mobile Application Development	20	SEM2	Core
7CS108	Data Science and Data Mining	20	SEM2	Core
7CS106	ITM and Computer Science Dissertation	60	SEM3	Core

## January (Full-time)

Part time students study alongside full time students. However, they do not study more than 80 credits in each academic calendar year.

Module	Title	Credits	Period	Type
7CC009	Research Methods in Computing	20	SEM1	Core
7CS107	Advanced Artificial Intelligence and Machine Learning	20	SEM1	Core
7CS109	Immersive Application Development	20	SEM1	Core

Continuing students will follow the programme indicated below:

## January (Full-time)

Part time students study alongside full time students. However, they do not study more than 80 credits in each academic calendar year.

Module	Title	Credits	Period	Type
7CC009	Research Methods in Computing	20	SEM1	Core
7CC003	Distributed and Mobile Computing	20	SEM1	Core
7CI019	Database Technologies	20	SEM1	Core

## September (Full-time)

Part time students study alongside full time students. However, they do not study more than 80 credits in each academic calendar year.

Module	Title	Credits	Period	Type
7CS106	ITM and Computer Science Dissertation	60	SEM3	Core
7CC009	Research Methods in Computing	20	SEM1	Core
7CS107	Advanced Artificial Intelligence and Machine Learning	20	SEM1	Core
7CS109	Immersive Application Development	20	SEM1	Core
7CC005	Web Technologies	20	SEM2	Core
7CC012	Mobile Application Development	20	SEM2	Core
7CS108	Data Science and Data Mining	20	SEM2	Core

Please note: Optional modules might not run every year, the course team will decide on an annual basis which options will be running, based on student demand and academic factors, to create the best learning experience.

## Learning, Teaching and Assessment

Academic Regulations Exemption:

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Reference Points:

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QAA descriptor for a Higher Education qualification at level 7: Master's Degree

QAA Computing Subject Benchmark

BCS requirements for postgraduate study

School of Technology E&D policy, 2010

Equality Act 2010

Overview of Assessment:

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As part of the course approval process, the course learning outcomes were mapped to each of the modules forming the diet of the programme of study. This process confirmed that all course learning outcomes can be met through successful completion of the modules. This mapping applies to the final award as well as to all of the intermediate awards.

Learning Outcomes	Modules
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## Learning Outcomes

## Modules

**PGCERT01** Demonstrate a systematic understanding of knowledge, and a critical awareness of current problems and/or new insights, much of which is at, or informed by, the forefront of your academic discipline, field of study or area of professional practice with a conceptual understanding that enables the student: (a) to evaluate critically current research and advanced scholarship in the discipline (b) to evaluate methodologies and develop critiques of them and, where appropriate, to propose new hypotheses.

**PGCERT02** Demonstrate a comprehensive understanding of techniques applicable to your own research or advanced scholarship and ability to continue to advance your knowledge and understanding, and to develop new skills to a high level.

**PGCERT03** Demonstrate originality in the application of knowledge, together with a practical understanding of how established techniques of research and enquiry are used to create and interpret knowledge in the discipline.

**PGCERT04** Ability to deal with complex issues both systematically and creatively, make sound judgements in the absence of complete data, and communicate your conclusions clearly to specialist and non-specialist audiences.

**PGCERT05** Demonstrate self-direction and originality in tackling and solving problems, and act autonomously in planning and implementing tasks at a professional or equivalent level.

**PGCERT06** Demonstrate the qualities and transferable skills necessary for employment requiring: (a) the exercise of initiative and personal responsibility (b) decision-making in complex and unpredictable situations (c) the independent learning ability required for continuing professional development

**PGDIP01** Demonstrate a systematic understanding of knowledge, and a critical awareness of current problems and/or new insights, much of which is at, or informed by, the forefront of your academic discipline, field of study or area of professional practice with a conceptual understanding that enables the student: (a) to evaluate critically current research and advanced scholarship in the discipline (b) to evaluate methodologies and develop critiques of them and, where appropriate, to propose new hypotheses.

**PGDIP02** Demonstrate a comprehensive understanding of techniques applicable to your own research or advanced scholarship and ability to continue to advance your knowledge and understanding, and to develop new skills to a high level.

**PGDIP03** Demonstrate originality in the application of knowledge, together with a practical understanding of how established techniques of research and enquiry are used to create and interpret knowledge in the discipline.

**PGDIP04** Ability to deal with complex issues both systematically and creatively, make sound judgements in the absence of complete data, and communicate your conclusions clearly to specialist and non-specialist audiences.

**PGDIP05** Demonstrate self-direction and originality in tackling and solving problems, and act autonomously in planning and implementing tasks at a professional or equivalent level.

**PGDIP06** Demonstrate the qualities and transferable skills necessary for employment requiring: (a) the exercise of initiative and personal responsibility (b) decision-making in

complex and unpredictable situations (c) the independent learning ability required for continuing professional development.

## Modules

**MA01** Display mastery of the principles and practices of advanced Computer Science topics; integrate and apply knowledge and skills to complex problems in a new area or form.

**MA02** Demonstrate a critical understanding of the concepts and technologies underpinning modern distributed systems, mobile platforms and the internet.

**MA03** Apply appropriate tools and advanced techniques to develop sophisticated web sites and Internet applications.

**MA04** Make informed judgements on the application of appropriate models and techniques in modern data handling systems.

**MA05** Demonstrate expertise in programming; apply well-chosen techniques and methodologies to generate sophisticated applications through team work.

**MA06** Conduct research into advanced areas of Computer Science; apply and extend an understanding of the nature of research and development; demonstrate the professional skills required to produce a high-quality deliverable and communicate results clearly through appropriate media.

## Teaching, Learning and Assessment:

Assimilate information from journal papers, lectures, text books, original articles, self study notes, selected sites on the internet and personal experience.

Reflect on the results of problem solving; making recommendations based on evidence and experience.

Apply a variety of techniques to distributed and mobile problems, including well-defined and ill-defined situations.

Reflect on the results of problem solving; making recommendations based on evidence and reflection.

Apply a variety of techniques to Web frameworks and development Internet applications, including well-defined and ill-defined situations. Reflect on the results of problem solving; making recommendations based on evidence and reflection.

Apply a variety of techniques to the problems associated with communication technology, including well-defined and ill-defined situations. You will gain a thorough knowledge of the requirements of modern communication techniques.

Work through a number of programming problems in a variety of scenarios during workshop sessions and in assessments, including individual and group-based exercises to reinforce learning. Reflect critically on the attempts of problem solving and personal performance.

Investigate and research in-depth in the subject area of Computer Science, producing a deliverable artefact related to the research undertaken. The Dissertation will critically reflect on the work undertaken.

## Assessment Methods:

At the University of Wolverhampton, a variety of modes of assessment will be used to support and test your learning and progress and to help you develop capabilities that are valued beyond your University studies and into your working life. Your course may include a variety of assessment activities:

Written examinations (including online examinations, open and closed book examinations and quizzes)  
Coursework (for example, essays, reports, portfolios, project proposals and briefs, CVs, poster presentation)  
Practical (for example, oral and video presentations, laboratory work, performances, practical skills assessment)

In the final year of your undergraduate degree, and at the end of your postgraduate degree, you are likely to be expected to write an extended piece of work or research, such as a dissertation or a practice-based piece of research.

## Student Support:

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### University provided support:

As well as providing general counselling support the University Counselling Service provides short courses on topics such as "Self Confidence", "Stress Management and Relaxation" and "Life Skills".

They also provide study skills and academic support, providing short courses such as provide help in areas such as "Writing and Assignment Skills", "Exam Techniques", "Enhancing Professional Skills", "Personal Development Planning" and "Making Choices for the Future.

University Libraries provide general academic skills support to all students. You can make an appointment with a study skills advisor for advice on areas such as academic writing, assignment planning, exam preparation, and time management.

In addition, there is a regular timetable of drop-in and bookable workshops covering information and digital literacy skills, including academic referencing. Students are supported by a designated subject librarian who is available to support research and project work.

### Course support:

At the start of your course you will be assigned a Personal Tutor who will guide you through the induction process and provide support and academic counselling throughout your course on an appointment basis. They should be able to offer you advice and guidance to help you liaise with other staff and support facilities in the School and the University.

Academic Coaches provide academic counselling and will be accessible throughout the week on a drop-in or appointment basis to discuss timetables, requests for extensions, requests for extenuating circumstances, general concerns about study and student life and general programme planning. Your named Course Leader will be available thereafter for meetings by appointment to discuss leave of absence, withdrawal, transferring to another course (internal and external), changes to mode of attendance, returning after leave of absence and direct entrants.

### Subject support:

Tutorials, workshops, seminars and meetings - provide the primary opportunities for students to interact with staff on topics relating to modules. All modules provide at least one of these forms of face-to-face support.

Formative feedback - tutors provide personalised written feedback on most summative assessments. The mechanism for feedback from purely formative tasks varies between assessments, but will always be provided in some form. On-line formative tasks often provide feedback straight away. On occasions tutors may provide generalised verbal feedback to the whole class on points relating to an assessment

Assessment and subject-based surgeries provide additional student support for subjects that students often need extra help with. They are often concentrated around the times when assessments take place. Revision sessions are provided for many modules that have exam-like tests and enable you to interact with tutors to review parts of the course. Mock exams and tests may provide opportunities to experience an examination environment before the final summative test and give you feedback on your understanding.

## Employability in the Curriculum:

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You will be able to approach a variety of high level roles with confidence, in areas such as the creative industries, product design, the games industry, education, public bodies and environmental monitoring.

If you are already in employment, the programme will enhance your academic and professional skills, enabling you to accelerate your career within the organisation, or seek employment in another organisation at an equivalent or higher management level.



THE UNIVERSITY OF OPPORTUNITY