

Course Specification

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Core Information

Awarding Body / Institution:	University of Wolverhampton		
School / Institute:	School of Engineering, Computing, and Mathematical Sciences		
Course Code(s):	CS031P01UV	Full-time	14 Months
Course Title:	MSc Computer Science with Professional Practice		
Hierarchy of Awards:	Master of Science Computer Science Postgraduate Diploma Computer Science with Professional Practice Postgraduate Certificate Computer Science with Professional Practice University Statement of Credit University Statement of Credit		
Language of Study:	English		
Date of DAG approval:	22/Feb/2019		
Last Review:	2018/9		
Course Specification valid from:	2018/9		
Course Specification valid to:	2024/5		

Academic Staff

Course Leader:	Dr Ian Coulson
Head of Department:	Dr Consolee Mbarushimana

Course Information

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

Entry Requirements:

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

A lower second Honours degree in Computer Science or equivalent.

A postgraduate certificate in Computer Science or a related subject with a minimum of grade 50% in all modules.

Alternatively:

Evidence of industrial certifications in Microsoft Certified Solutions Expert (MCSE), Cisco Certified Internetwork Expert (CCIE), and BCS will also be considered for suitable candidates with a minimum of 3 years working experience in related industries. An interview process will also be utilised to verify suitability for the course for candidates with non-standard academic backgrounds but with demonstrable industry experience in the field.

International Applicants

Your qualifications need to be deemed equivalent to the above entry requirements. English Language requirements are normally IELTS 6.0 with a minimum of 5.5 in each area (unless otherwise stated) or equivalent accepted qualification.

For further information relating to overseas qualification please use the following link
<https://www.wlv.ac.uk/international/our-locations/your-country/>

Distinctive Features of the Course:

The MSc Computer Science with Professional Practice aims to promote and develop a professional attitude in students wishing to enter employment within the field of Computer Science.

For the Professional practice students will be provided with an opportunity to secure a summer work placement, giving students an experience of the workplace environment to put their learning into practice. Students will be required to complete an additional Module: 7CS025 – Professional Work Experience and Development and produce a reflective learning portfolio to demonstrate tasks undertaken and experience gained during the placement.

NOTE: Placements are offered on a competitive basis, as determined by the employers, but are not guaranteed. Placements may be paid or unpaid and enhances the students' employability.

In addition 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:

The educational aims of this course are:

- To provide students with a solid foundation for a career or further study in computer science.
- To enable students to develop a solid grounding in the theoretical underpinnings of contemporary developments in computer science.
- Be exposed to a wide range of appropriate theory, practices and tools in computer science, to implement and evaluate computer-based systems.
- The course has been developed with reference to the requirements of computer science professional bodies. It aims to produce post graduates with subject-specific and transferable knowledge and skills suited to a career in the computer science industry or other related IT disciplines.

Intakes:

September
January
May

Major Source of Funding:

Office for Students (OFS)

Tuition Fees:

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	Full Time	£7278.00
2021/2	Overseas	Full Time	£14950.00
2022/3	H	Full Time	£8883.00
2022/3	Overseas	Full Time	£15450.00
2023/4	H	Full Time	£9328.00
2023/4	Overseas	Full Time	£16450.00
2024/5	H	Full Time	£9794.00
2024/5	Overseas	Full Time	£16950.00

PSRB:

None

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
7CS108	Data Science and Data Mining	20	SEM2	Core
7CC012	Mobile Application Development	20	SEM2	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
7CS109	Immersive Application Development	20	SEM1	Core
7CS107	Advanced Artificial Intelligence and Machine Learning	20	SEM1	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
7CS106	ITM and Computer Science Dissertation	60	SEM2	Core
7CS025	Professional work experience and development	20	CRYRA	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
7CC009	Research Methods in Computing	20	SEM1	Core
7CS109	Immersive Application Development	20	SEM1	Core
7CC005	Web Technologies	20	SEM2	Core
7CS107	Advanced Artificial Intelligence and Machine Learning	20	SEM1	Core
7CS108	Data Science and Data Mining	20	SEM2	Core
7CC012	Mobile Application Development	20	SEM2	Core
7CS106	ITM and Computer Science Dissertation	60	SEM3	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
7CS025	Professional work experience and development	20	INJR	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:

Section 3.4.2 - Exemption to extend the maximum period of registration to three years, with a normal duration of 18 months (or three semesters), in full-time mode of study.

Section 5.1.1 - Exemption to exceed the standard credit requirements for a Master's Degree, increasing to a minimum of 200 credits, in order to include a 20 credit placement module.

Section 5.6.1 - Exemption to exclude placement modules from the criteria for classification of a Master's Degree.

APPROVED by AFRSC on 31/1/2019.

Reference Points:

QAA Subject Benchmark Statement Computing, 2016

http://www.qaa.ac.uk/Publications/InformationAndGuidance/Documents/QAA386_Computing.pdf

QAA FHEQ level descriptors (M Level).

British Computing Society (BCS)

Overview of Assessment:

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
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.

Learning Outcomes

Modules

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.

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

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:

You will undertake a wide range of learning activities including;

- Computer based learning
- Supported learning using the University VLE (CANVAS) as a learning tool, for information and interactive communications
- Lectures
- Tutorials (smaller group / one-to-one)
- Workshops
- Case studies
- Structured laboratory exercises
- Individual structured assignment-based learning
- Directed study
- Individual or group exercises
- Research project investigations.

Assessment methods will include;

- Written reports
- Essays
- Literature reviews
- Exams
- Presentations.

Students will also have the opportunity to engage into formative assessment throughout the course, especially during exercises in the practical sessions where feedback on progress and performance will be given by their tutors for each of the tasks allocated. The assessment strategy for this course is designed around a holistic evaluation on knowledge and skills acquired with strong emphasis on the requirements for this mode of delivery and diverse skills, background and expectations of the target audience. All assessments used in the course are in perfect alignment with University requirements, regulations and policies. Coursework assignments typically incorporate formative feedback so that students can gain an insight into whether their work is meeting the necessary thresholds and focus on meaningful remarks to improve both their performance and understanding in the subject matter.

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:

General University Support:

[University Libraries](#) are the key source of academic information for students. Libraries provide physical library resources (books, journal, DVDs, etc.) and offer a range of study areas to allow students to study in the environment that suit them best: Social areas, quiet and silent areas. Libraries also provide access to wide range of online information sources, including eBooks, eJournals and subject databases.

Libraries also provide students with academic skills support via the [Skills for Learning programme](#). Students on campus can attend workshops or ask for one-to-one help on a range of skills such as academic writing and referencing. Students can access a range of online skills material at: www.wlv.ac.uk/lib/skills

The [University Student Support website](#) offers advice on a variety of matters (careers, counselling, Student Union advice, etc.). Students can also access these services by booking appointment with the SU, careers, counselling services, etc.

Course Specific Support:

Students will have access to both departmental and university-wide support during their studies. Students will have access to a personal tutor and may book appointments at any point during the academic year. Newly enrolled students on the course will receive a comprehensive induction in the week prior to the commencement of the academic year. In addition to this, the course co-ordinator or his/her representative will meet you to explain the course structure and other issues relating to your experience at the university. These introductions will give you outlines of your course and units, a description of the ways you will be encouraged to develop your knowledge and skills, and signpost resources and materials to assist the process of your learning and success. You will be allocated a personal tutor when you join the course. This academic will be responsible of monitoring your academic progress throughout the course and will help you with any academic or personal issues that might come up. The personal tutor is your consistent point of contact for support and guidance but will on occasion refer you to other university staff for specific issues.

Employability in the Curriculum:

The course modules have been designed with reference to industry accreditation requirements and will be periodically evaluated against these.

The addition of 7CS025 - Professional work experience and development module will embed employability in this course by allowing students to undertake a summer placement with an employer, University of Wolverhampton IT services or The Wolverhampton Cyber Research Institute (WCRI).

In addition the delivery of the course is strongly underpinned by research informed teaching and access to industry level software and hardware. It is fully integrated with modern tools used in computer science.

The module 'Group-based Software Development Project t' in particular requires you to work in a team so as to apply a current project management methodology that embraces all of these knowledge areas in an integrated way while going through the stages of planning, execution and project control; you will work as part of a team, take responsibility and make autonomous decisions that impact on the project team performance.

In addition, and somewhat complementary the final project fosters independent and autonomous study: typically derived from your own ideas, in collaboration with a dedicated member of the teaching staff as project supervisor. That gives the ability to initiate discussion and project ideas that enrich the academic context in your studies and provide the foundations for a solid, relevant and strong project delivered at the end of your course.

The course has been designed in close consultation with computer science experts and utilises unique tools and platforms to deliver its core elements, skills and capabilities required in the field.



THE UNIVERSITY OF OPPORTUNITY