Aston University

PROGRAMME SPECIFICATION
(2012-13)

Programme Title	Multimedia Computing
UCAS/JACS Code	G450
School/Subject Area	Engineering and Applied Science / Computer Science, Electronic Engineering
Final Award	BSc Honours
Interim Awards	Certificate of Higher Education (stage 1) Diploma of Higher Education (stage 2)
Mode(s) of Study	Full-Time, or Sandwich including placement year
Normal Length of Program	3 academic years (full-time) or 4 years (sandwich, comprising: two academic years; 40 week placement during third year; final academic year)
Total Credits	360 or 480 for the Sandwich Degree
Programme Accredited By	British Computer Society Chartered IT Professional (CITP) Accreditation
Dates Program Specification Written and Revised	December 2004, July 2005, August 2006, August 2007, August 2008, June 2009, June 2010, July 2011

Education Aims of the Programme	• Produce Graduate Software Developers who specialize in using the computer as a communication tool.Such graduates will be Well prepared for a rewarding career as a technical professional Adaptable to a wide range of opportunities in the design and application of information communication systems, typically making use of a combination of multimedia, Internet and computer software technologies Highly attractive to employers. • Enable students to gain a practical systems development capability based on well-founded principles. • Promote generic attributes appropriate to professionally oriented graduates. • Enable students opting for the sandwich variant of the programme to enhance their career preparation through a period of structured professional training. • Provide a participation route leading to employment as a technical professional that is accessible to students who have demonstrated good intellectual aptitude rather than necessarily subject-specific preparation.
Relevent Subject Benchmark Statements and other External and Internal Reference Points used to inform programme outcomes	• Framework for Higher Education Qualifications • Quality Assurance Agency for Higher Education subject benchmark statement for Computing • Professional approval requirements of the British Computer Society

Programme Structures and Requirements: Levels, Modules and Credits Stage 1				
Module Title	**Credits**	**Level**	**Module Code**	**Core**
Java Programming Foundations (CB)	20	4	CS1020	YES
Multimedia Software and Applications	20	4	CS1040	YES
Information Systems and Databases	20	4	CS1050	YES
Academic and Professional Communication Skills	10	4	CS1150	YES
Introduction to Computer Systems	10	4	CS1170	YES
Internet Computing	10	4	CS1240	YES
Mathematics for Computing Professionals	10	4	CS1260	YES
Problem Solving	10	4	CS1320	YES
Computer Systems Organisation	10	4	CS1420	YES
TOTAL	120			

Programme Structures and Requirements: Levels, Modules and Credits Stage 2				
Module Title	**Credits**	**Level**	**Module Code**	**Core**
User-centred Group Project (MC)	20	5	CS2030	YES
Multimedia Science	20	5	CS2040	YES
Software Lifecycle and Design	20	5	CS2090	YES
Computer Graphics	10	5	CS2150	YES
Professional and Social Aspects of Computing	10	5	CS2160	YES
Human-Computer Interaction	10	5	CS2260	YES
Java Program Construction	10	5	CS2300	YES
Internet Applications and Techniques	10	5	CS2410	YES
Computer Animation	10	5	CS2420	YES
TOTAL	120			

Programme Structures and Requirements: Levels, Modules and Credits Stage P				
Module Title	**Credits**	**Level**	**Module Code**	**Core**
Professional Placement	120	P	CSP010	NO
TOTAL	120			

Programme Structures and Requirements: Levels, Modules and Credits **Stage F**				
Module Title	**Credits**	**Level**	**Module Code**	**Core**
Operating Systems	10	5	CS2230	NO
Individual Project	40	6	CS3010	YES
Mobile Design and Development	20	6	CS3040	NO
Enterprise Application Technology	10	6	CS3160	NO
Natural Language Processing and Applications	10	6	CS3180	NO
Information Security	10	6	CS3190	NO
Geographic Information Systems	10	6	CS3210	NO
Testing and Reliable Software Engineering	10	6	CS3270	NO
Multimedia Information Retrieval	10	6	CS3320	YES
Image and Video Processing	10	6	CS3330	YES
Multi Agent Systems	10	6	CS3340	NO
Software Project Management	10	6	CS3360	NO
Interaction Design	10	6	CS3410	YES
Data Mining	10	6	CS3440	NO
Game Development	10	6	CS3450	YES
Enterprise Computing Strategies	10	6	CS3460	NO
TOTAL	120			

Programme Outcomes, Learning and Teaching and Assessment Strategies			
Knowledge and Understanding			
	On successful completion of their programme students, are expected to have knowledge and understanding of:	**Learning, Teaching and Assessment Strategies to enable outcomes to be achieved and demonstrated**	
		Learning and Teaching Methods	**Assessment Methods**
1	The legal, social and ethical context for professional ISE	A mixture of formal lectures, tutorial classes, computing laboratory classes, independent practical work associated with taught and project modules,independent study. For the sandwich option, an agreed programme of professional experience and training.	Knowledge and understanding are assessed through unseen examinations, and project and coursework reports. Assessment of the sandwich option is based on: • a reflective log-book kept by the student • an analytical final report written by the student • reports by an academic supervisor, taken together with the employers views.
2	Concepts and principles and methodologies relevant to chosen areas of specialisation, thereby acheiving additional depth and breadth		
3	(Sandwich students only) The relevance of the programme's discipline-specific and generic content to the professional world		
4	Concepts and principles of information systems engineering (ISE), emphasising software engineering, computer systems and application technologies		
5	Principles for the communication of information using various media		
6	Analysis, design and implementation methods applicable to ISE in general, but emphasising systems enjoying multimedia and Internet communication		
7	Mathematics relevant to multimedia computing systems		

Intellectual Skills			
	On successful completion of their programme students, are expected to have knowledge and understanding of:	**Learning, Teaching and Assessment Strategies to enable outcomes to be achieved and demonstrated**	
		Learning and Teaching Methods	**Assessment Methods**
1	Integrate and apply knowledge and methods from a variety of sources	Intellectual skills are developed through formal lectures (often including suitable case studies),tutorial classes, practical work (both assessed and unassessed) associated with taught modules, and project work.	Unseen written examinations, coursework submissions relating to design exercises and communication scenarios, project reports and presentations.
2	Analyse requirements of information manipulation and communication problems and design solutions based around appropriate integration of multimedia, Internet and computer software technologies		
3	Plan, conduct and report on a programme of work covering multiple system lifecycle stages and leading to an end-product, with evaluation of the end-product, and the process and technologies employed		

Professional Skills			
	On successful completion of their programme students, are expected to have knowledge and understanding of:	**Learning, Teaching and Assessment Strategies to enable outcomes to be achieved and demonstrated**	
		Learning and Teaching Methods	**Assessment Methods**
1	Apply Internet technology	Formal lectures (including suitable case studies), tutorial classes, practical work (both assessed and unassessed) associated with taught modules, and project work.	Unseen written examinations, coursework submissions relating to design exercises and communication scenarios, project reports and presentations.
2	Prepare technical reports and presentations		
3	Use appropriate diagrammatic and formal written notations in design work and in reports		
4	Use a programming language and a variety of software tools and environments to construct, test and document software applications, which may include multimedia components.		
5	Use multimedia production systems		
6	Apply ISE techniques to achieve effective communication and interaction with end users		

Transferable Skills			
	On successful completion of their programme students, are expected to have knowledge and understanding of:	**Learning, Teaching and Assessment Strategies to enable outcomes to be achieved and demonstrated**	
		Learning and Teaching Methods	**Assessment Methods**
1	The ability to communicate effectively in writing and through technical diagrams	Written and oral communication and information skills are taught in a dedicated module employing tutorial classes and practical work and further practised in project modules in particular. Other skills are developed through practical work for taught modules, project work, and the professional placement option.	An English Speaking Board oral examination provides independent certification for (1). Other assessments deriving from practical work (particularly project reports and presentations) provide direct or indirect evidence of the level of skills acquired.
2	Information gathering skills		
3	Team-working skills		
4	A capability for independent working able to tackle substantial practical problems with limited individual guidance		
5	Problem solving skills		
6	Good ICT skills		
7	Time management skills		
8	The ability to communicate effectively using multimedia tools		

Entry Requirements	As specified by the General Regulations for Undergraduate Programmes.
Programme Regulations	**Attendance requirements** Full-time students are normally required to attend the University for the first, second and third term of each of three consecutive academic years. Sandwich students are normally required to attend the University for the first, second and third term of the first, second and fourth of four consecutive academic years, and undertake an integrated programme of professional training between the second and fourth academic years. The approved specification for any particular module may include assessment elements that require attendance at scheduled classes. **Professional Training** The programme of professional training undertaken by a sandwich student must be approved by the Associate Dean for Undergraduate Programmes and of at least 40weeks duration, excluding any periods of vacation. It will be assessed on a pass/fail basis and will not contribute to the overall degree classification. **Specific assessment requirements for modules** The module *CS1020 Java Programming Foundations* is fundamental to the entire programme of study and cannot be condoned for progression on the Honours Degree, but may be condoned for progression on the Ordinary Degree. **Requirements for the Ordinary Degree** The modules taken in a particular stage of study by a student who has transferred to the Ordinary Degree are derived from those for the corresponding stage of the Honours Degree by omitting selected modules to reduce the credit requirement of the stage. The modules omitted must be approved by the Associate Dean for Undergraduate Programmes. Project modules (CS2030 and CS3010) cannot be omitted. **Alterations to the programme for 2012/13** CS3180 and CS3340 will not be available in 2012/13.

This specification provides a concise summary of the main features of the programme and the threshold learning outcomes that a student might normally be expected to achieve and demonstrate if he/she takes full advantage of the learning opportunities that are provided. **The individual modules included in the programme may differ from those included in this programme specification as our programmes are subject to continuous review**. Information on admissions requirements and career opportunities is available in the relevant prospectus. More detailed information on the learning outcomes, content and teaching, learning and assessment methods of each module can be found in the appropriate module guides and programme handbook(s) which are available to students on enrolment.