Half-Award in Information Systems

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Programme Specification

Section 1: Basic Data

Awarding institution/body	University of the West of England
Teaching institution	University of the West of England
Faculty responsible for programme	Computing, Engineering and Mathematical Sciences
Programme accredited by	N/A
Highest award title	BA (Hons) Information Systems &
Default award title	
Interim award title	BA Diploma of Higher Education, Certificate of Higher Education
Modular Scheme title (if different)	
UCAS code (or other coding system if relevant)	
Relevant QAA subject benchmarking group(s)	Computing
On-going/valid until* (*delete as appropriate/insert end date)	
Valid from (insert date if appropriate)	September 2003

Authorised by…   **Date:…**

Version Code

For coding purposes, a numerical sequence (1, 2, 3 etc.) should be used for successive programme specifications where 2 replaces 1, and where there are no concurrent specifications. A sequential decimal numbering (1.1; 1.2, 2.1; 2.2 etc) should be used where there are different and concurrent programme specifications

Section 2: Educational Aims of the Programme

The half award in Information Systems has the following aims:

- to enable students to recognise the importance of information and to realise the potential benefits from the application of information technology to information systems;
- to develop the students' understanding of the role, capabilities and limitations of technology and to enable them to evaluate and select appropriate technological solutions;
- to equip students with the skills and knowledge needed both for the development of computer based information systems and for the selection of an appropriate approach to that development;
- to increase students' awareness of the organisational and inter-personal context in which information systems are developed;
- to develop the students' critical, evaluative and team working abilities.
- to develop study skills that will enable students to become independent, lifelong learners.

Section 3: Learning Outcomes of the Programme

The award route provides opportunities for students to develop and demonstrate knowledge and understanding, qualities, skills and other attributes in the areas summarised in the following charts. Specific learning outcomes for individual modules can be seen in the module specifications.

A. Knowledge and Understanding

Knowledge and Understanding of:	Teaching/Learning Methods and Strategies	Assessment

1. foundations and history of Information Technology (IT) and trends in IT
2. hardware and software components of IT, networks and databases
3. systems analysis and design methods and techniques
4. data analysis and design methods and techniques
5. the information systems (IS) development process
6. IS development practice
7. relationship between computer-based IS and organisational/social environment
8. methods and issues in e-business development
9. web page and web site design
10. web authoring tools
	The half award can be seen as formed from three complementary themes:
	
	1. an examination of the different contextual settings for the application of information systems
	  2. a treatment of information systems analysis and design, extending from a general base in the Development & Practice modules to enable students to focus on specific areas of interest in the final year options.
	  3. a treatment of the information systems context, present throughout the modules and reflecting a specifically IS attitude towards applications of IT.
	These themes become progressively intertwined in successive Levels of the award.
	Throughout, knowledge and understanding are developed by parallel engagements with theory and practice, mediated by constant discussion and evaluation.
		Knowledge and understanding are assessed at the conceptual and theoretical level by examination, primarily, and practically in coursework assignments. Different elements are covered as follows:
		
		▪ Introductory technological elements (1-2): in the Information Technology module.
		
		▪ Systems and data analysis and design, and IS development and practice (3,4,5,6): in Development & Practice 1 and 2.
		
		▪ Organisational/social environment (7): fundamental to IS and assessed *passim.*
		
		▪ Internet/WWW, web-based information systems and web design (9,10): Web-Based IS
		
		▪ E-Commerce and business uses of the Internet (8): in the Foundations of E-Business

B. Subject Specific Skills

Subject specific skills	Teaching/Learning Methods and Strategies	Assessment
1. model and design procedures, data structures, information systems (IS) 2. construct basic IS, including web-based IS 3. use system development support tools, including CASE tools 4. follow system development methods, including prototyping 5. build applications using tools, methods, packages 6. specify requirements for e-business applications and recognise business opportunities opened up by IT 7. select tools for e-business applications 8. use web authoring tools to design and implement web pages and web sites	The specific skills inculcated in the half award can be grouped into three major categories: 1. generic skills in IS analysis, design, and implementation, leading towards general competency in IS practice 2. skills relating to the application of information technology and information systems to business objectives and the issues surrounding their use. 3. specific skills in application development such as database applications, particularly Web, analysis and design, leading towards competency in usability and functionality design These three skill sets are developed in parallel from the beginning of the course, each gaining momentum as the course progresses, and the three mutually supporting one another. All three, for effective development, depend on collaboration and an unremitting outward orientation towards use and users. The development of these skill sets requires focused material delivery and assignment design on the part of tutors, extensive student lab work and group work, exposure to real-world requirements, and commitment and creativity on the part of students.	For the development of these skills, coursework is particularly important., though students' ability to reflect on experience and extend it to an analysis of novel domains is also something that can be examined formally. Subject-specific skills are principally assessed as follows: ▪ Development of a basic skill set for building IS, including abilities to model, analyse, design and construct systems, to use tools, methods, and packages effectively, and to work effectively individually and in teams (1,2,3,4,5): in the three Development & Practice modules, Applied IT, Information Technology in Context and Information Systems in Society. ▪ Additional skills for developing business applications and web design skills (6,7,8): in Web-Based IS and Foundations of E-commerce. ▪ A range of options in the second and third years permit further assessment of the specific skills.

C. Cognitive (Intellectual) Skills

Cognitive (Intellectual) Skills	Teaching/Learning Methods and Strategies	Assessment
1. Critical Thinking 2. Analysis 3. Synthesis of different types of information 4. Evaluation 5. Problem solving 6. Appreciate problem contexts 7. Balance conflicting objectives	In information systems courses, including this one, the emphasis from the outset is on *applying* and *using* information technologies in human contexts. Because 'context' is understood as fundamental, and not as an outer layer on a technical core, these cognitive skills tend to be developed in parallel, rather than sequentially. Thus, element 6 is developed alongside elements 5 and 2; element 7 is developed alongside element 3; and elements 1 and 4 are inculcated from the beginning. Element 6 is particularly salient in IS, where 'problem context' is understood broadly, to include organisational and social settings, as well as a historical perspective. This produces a concomitant breadth in elements 3 and 5, because problems are viewed as sociotechnical (and situated) rather than technical (and abstract), and relevant information sources are correspondingly expanded. Analysis (2) - coupled with design - and problem solving (5) are strongly featured throughout the half award particularly in the three Development and Practice modules. Appreciation of Problem Contexts (6) is also found as an element widely distributed across the modules. Even in the technically oriented modules constant reference is made to the context and background in which IS are applied. The more practically focused modules move beyond *appreciating* the problem context towards *acting* within it. These modules also give students the most direct and practical experience of balancing conflicting objectives (7). Modules with a higher theoretical or descriptive content are the ones where synthesising different types of information (3) will be most overt, but the half award is also designed to achieve a synthesis between theoretical and practical knowledge. Critical thinking (1) and evaluation (4), are foundational principles for the IS discipline as conceived at UWE. Attention to these is seen everywhere in the award, from the Level 1 technical modules upwards, demonstrating the core commitment in IS awards, including one like this with significant technical content, to developing reflective practitioners.	These cognitive skills permeate the award and cannot be narrowly tied down to the assessment in particular modules. Some general observations can be made: • analysis (2) problem solving (5) and evaluation (4) are most directly assessed by coursework in the Development & Practice modules. • appreciation of problem contexts (6) and balancing conflicting objectives (7) is assessed in the development and context modules. • critical thinking (1), synthesis (3), and evaluation (5) can be well assessed throughout by examination.

D. Key (Transferable) Skills

Key (Transferable) Skills	Teaching/Learning Methods	Assessment
1. Communication Skills 2. Self-management skills 3. IT skills in context 4. Problem-formulation and decision making 5. teamwork	Students' communication skills are developed through: ▪ participation in tutorials and other discussion forums ▪ negotiation of work plans and requirements with team members ▪ presentation of work to peers, staff ▪ writing essays, reports, and examination answers Students' self-management skills and teamwork are developed through: ▪ self-managed practical work ▪ effective participation in tutorial and laboratory sessions ▪ methodical execution of analysis and design tasks ▪ synchronising with others in team work ▪ scheduling assignment work and revision Students' IT skills and Problem formulation and decision making are developed through: ▪ regular involvement in systems analysis and design activity ▪ use of range of system development tools, methods and packages ▪ cumulative mastery of tools and methods ▪ use of online teaching materials ▪ sustained use of the Internet ▪ emphasis on user-centred and accessible systems design work ▪ building systems to a user-focused specification	All of the skills are demonstrated in varying degrees in all assessments with the exception of teamwork, which is required in important elements of the coursework, and IT skills, needed for most of the coursework. It would be impossible to progress to completion on the half-award without demonstrating a basic competence in all of these skills.

Section 4: Programme Structure   Half Award in Information Systems

Note: This structure is indicative and subject to change

Information Systems in Society	Information Systems Development & Practice 3	20 credits
UFIE95-20-3	UFIE98-20-3	Option 2

Year 2 P (Industrial Placement Year)

Information Technology in Context	Information Systems Development & Practice 2	20 credits
UFIE94-20-2-20-2	UFIE97-20-2	Option 1

Applied Information Technology	Information Systems Development & Practice 1	Introduction to Web-Based Information Systems
UFIE93-20-1	UFIE96-20-1	UFIE7Q-20-1

Option 1 taken from	
UFIE7U-20-2	eBusiness
UFIE9A-20-2	Human-Computer Interaction
UFIE9C-20-2	Information in Action
UFQEGM-20-2	The Rational Manager

Option 3 taken from	
UFIE86-10-3	E Commerce Special Interest Groups
UFIE8Y-20-3	Information Systems Dissertation
UFIE9F-10-3	Hypermedia Information Systems
UFIE9H-10-3	Computing & Law
UFIE9L-10-3	Information Technology Audit
UFIE9M-10-3	Technical Editing
UFIE9R-10-3	Knowledge in Organisations

Section 5: Entry Requirements

The entry requirements are the university's minimum requirements for entry to a degree.

Section 6: Assessment Regulations

The university's Modular Assessment Regulations apply.

Section 7: Student Learning: Distinctive Features and Support

The School of Information Systems has substantial experience of teaching modules designed with an emphasis on the development in students of a critical, reflective practice in IS, and of organising and running, with students, IS projects with external clients. This experience will be brought to bear in the delivery of this programme.

Within the Faculty of Computing Engineering and Mathematical Sciences, student learning is supported in the following distinctive ways:

➢ Through provision of a large Open Access Laboratory (3P10) containing 50 machines that provide students with access to a wide range of computer-based applications, and a Multimedia Laboratory (3P28) with specialist provision in multimedia systems;
➢ through provision of nine other, frequently available, computer laboratories that provide similar access;
➢ through the CEMS System Support Helpdesk that provides a range of support for learning to students including:
   • support for a wide range of applications used by the students;
   • help in the form of Assistants who are trained to resolve many common student problems;
   • and help in the form of a large set of "Helpsheet Documents", developed over a number of years, that cover a variety of common student requests for information;
➢ in level-3 modules there is scope for engagement with current research undertaken by the staff of the faculty.

In addition to these general features, the School of Information Systems has substantial experience of teaching modules designed with an emphasis on the development in students of a critical, reflective practice in IS, and of organising and running, with students, IS projects with external clients. This experience will be brought to bear in the delivery of the Internet Systems half award.

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Section 8 Reference Points/Benchmarks

The Information Systems half-degree will serve to expand the range of opportunities available within the Joint Honours Programme, which has itself played a large part in fulfilling the university's mission of promoting educational opportunity. It will have a place within a suite of degrees and half-degrees: the Faculty already offers degrees in a range of aspects of computing and computer science as well as half-degrees in computing, in mathematics, in statistics, in business decision mathematics and internet systems. This award complements this range.

This Information Systems award provides a general education in the discipline and includes a choice of options that permit students to follow their own specific interests within the discipline.

The QAA Subject Benchmark Statement for Computing is applicable to this proposal. The design team has considered it in drawing up the structure of the proposed half-degree, and is of the view that the proposal falls clearly within the scope of the benchmarks, as regards curriculum, teaching and learning, and the benchmarking standards themselves.

The benchmarks recognise (paragraph 3.3) that diversity of provision is to be encouraged, and hence joint degrees have an important place. Nevertheless, there are inevitably constraints on the breadth of coverage of the subject possible within a "half-degree". The design team has faced these constraints as part of the course design as set out in the benchmarks (paragraph 3.1), and it believes that it has successfully met them all to the extent that it is possible to do so within the half-degree structure. More positively, students registered for a joint award will bring with them knowledge and interests from their other discipline which will serve as additional context for their study of Information Systems. Students with an interdisciplinary perspective may indeed be better equipped for dealing with system design in real contexts, where conflicts of interests and plurality of perspectives are normal, and where practitioners need to be resourceful and inventive.

The scope of the half-degree in Information Systems falls within the "body of knowledge" identified by the benchmarks, and specifically in the area of "Information Systems", which is explicitly identified in the benchmarks as part of the knowledge area of computing.

The benchmarks also contain (section 5) statements of the standards expected of graduates at both modal and threshold levels. The team is of the view that graduates of the proposed programme will be able to meet the required standards, albeit in some cases to a lesser depth than would be expected of a graduate in a full honours degree in the discipline.

This specification provides a concise summary of the main features of the programme and the learning outcomes that a typical student might reasonably be expected to achieve and demonstrate if he/she takes full advantage of the learning opportunities that are provided. More detailed information on the learning outcomes, content and teaching, learning and assessment methods of individual modules are to be found in the module specifications.