BSc Economics with Information Technology UCAS code: L1G5

For students entering Part 1 in 2006

Awarding Institution:	The University of Reading
Teaching Institution:	The University of Reading
Relevant QAA subject benchmarking group(s):	Economics
Faculty of ESS	Programme length: 4 years
Date of specification: April 2007	
Programme Director:	Dr Simon Burke
Programme Adviser:	Dr Nigel Wadeson (Economics) Dr Lily Sun (Systems Engineering)
Board of Studies:	Information Technology and Business
Accreditation:	None

Summary of programme aims

This programme aims to prepare students for responsible professional leadership roles in the Information Technology industry, with a particular emphasis on the business elements. Graduates will be well qualified to play a disciplined and creative part in a research, development or support environment.

Transferable skills

The University's Strategy for Teaching and Learning has identified a number of generic transferable skills which all students are expected to have developed by the end of their degree programme. In following this programme, students will have had the opportunity to enhance their skills relating to career management, communication (both written and oral), information handling, numeracy, problem-solving, team working and use of information technology.

As part of this programme students are expected to have gained experience in the following transferable skills IT (programming, word processing, databases and use of standard software), technical writing, oral presentations, team-working, problem-solving, use of library resources, time-management, career planning and management, and business awareness.

Programme content

In the first year students spend 50% of their time on Economics and 50% on IT related subjects. More time is spent on Economics in latter years. The third year is spent on an approved placement.

Part 1 (three terms)

Compulsory modules

Mod Code	*Module Title*	*Credits*	*Level*
SE1TQ5	*Commercial off-the-shelf Software 1*	20	C
SE1SB5	*Software Engineering 1*	20	C
SE1TR5	*E-business 1*	20	C
EC1F1A	*Introductory Microeconomics*	20	C
EC1F1B	*Introductory Macroeconomics*	20	C
EC1F5	*Introductory Quantitative Techniques*	20	C

Part 2 (three terms) *Credits* *Level*

Of the 120 credits in Part 2, 5 are taken up by Career Management Skills (distributed model)

Compulsory modules

Mod Code	*Module Title*		
CS2TD7	*Databases*	10	I
CS2TZ3	*PC Infrastructure*	10	I
CS2TR6	*E-business 2*	20	I
EC201A	*Microeconomics I.1*	20	I
EC202A	*Macroeconomics I.1*	20	I
EC203A	*Introductory Econometrics I.1*	20	I
	Any two of		
EC201B	*Microeconomics I.2*	10	I
EC202B	*Macroeconomics I.2*	10	I
EC203B	*Introductory Econometrics I.2*	10	I

Placement Year *Credits* *Level*

Mod Code	*Module Title*		
CS2BW4	*Placement Work Experience*	80	I
CS2BP4	*Placement Project*	40	I

Part 3 (three terms) *Credits* *Level*

Compulsory modules

Mod Code	*Module Title*		
EC308A	*Business Economics 1*	20	H
EC3DSI	*Dissertation (on a subject relating IT and Economics)*	40	H
CS3TA4	*Enterprise IT Architectures*	10	H
CS3TC4	*Project Management*	10	H
CS3TR4	*Informatics for E-Enterprise*	20	H

Optional modules:

Students should take 20 credits of optional material from these:

EC301A	*Microeconomics II.1*	20	H
EC302A	*Macroeconomics II.1*	20	H
EC311A	*International Economics 1*	20	H
EC312A	*Economics of Development 1*	20	H
EC314A	*Public Economics 1*	20	H
EC315A	*Economic Issues in Historical Perspective 1*	20	H
EC316A	*European Economic Integration 1*	20	H
EC320A	*Money & Banking 1*	20	H
EC322A	*Economics of Labour 1*	20	H
EC324A	*European Urban & Regional Economics 1*	20	H
EC328A	*Economics of Land, Development & Planning 1*	20	H
EC334A	*Environmental Economics 1*	20	H
EC337A	*Processes of Long Term Political and Economic Change 1*	20	H
EC340A	*Corporate Social Responsibility 1*	20	H

Progression requirements
To proceed to Part 2 students must obtain an overall average mark of 40% **and** no mark lower than 30% in any module, except that marks of less than 30% in a total of 20 credits may be condoned provided that the candidate has pursued the course for the module with reasonable diligence and has not been absent from the exam without reasonable cause.

To proceed from Part 2 to the placement year students must obtain an overall average mark of 40% **and** no mark lower than 30% in any module, except that marks of less than 30% in a total of 20 credits may be condoned provided that the candidate has pursued the course for the module with reasonable diligence and has not been absent from the exam without reasonable cause.

To be eligible for Honours, students must obtain an overall average mark of 40% **and** pass the placement year. Students who pass Part 2 are eligible to transfer to the Business Information Technology BSc (this degree does not include a placement year).

Summary of teaching and assessment
Teaching is organised in modules that typically involve both lectures and practical work. Most modules are assessed by a mixture of coursework and formal examination. However, some modules are assessed only as coursework. While others are assessed solely by examination. Details are given in the relevant module descriptions.

Admission requirements
Entrants to this programme are normally required to have achieved:
320 points from three A2 levels or 350 points from three A2 levels and one AS level (including Mathematics at A2 level or GCSE Grade A; and either an essay-based A2 or AS level or GCSE Grade A English).
International Baccalaureate: 35 points
Irish Highers: AAABB

Equivalent qualifications are acceptable.

Admissions Tutor: To be confirmed.

Support for students and their learning
University support for students and their learning falls into two categories. Learning support includes IT Services, which has several hundred computers and the University Library, which across its three sites holds over a million volumes, subscribes to around 4,000 current periodicals, has a range of electronic sources of information and houses the Student Access to Independent Learning (S@IL) computer-based teaching and learning facilities. There are language laboratory facilities both for those students studying on a language degree and for those taking modules offered by the Institution-wide Language Programme. Student guidance and welfare support is provided by Personal Tutors, the Careers Advisory Service, the University's Special Needs Advisor, Study Advisors, Hall Wardens and the Students' Union.

Within the School of Business each module lecturer has appointed office hours during which they may be consulted without prior appointment. A resources room is also available for private study. Within the School of Systems Engineering additional support is given though practical laboratory classes. The development of problem-solving skills is assisted by appropriate assignment and project work. Both Schools provide general handbooks provides general information about the staff and facilities within the respective school.

There is a Course Adviser to offer advice on the choice of modules within the programme. Course handbooks are provided for each Part of the course: these give more details about the modules which make up the degree.

Career prospects

This new degree is designed to be industry oriented. It is expected that graduates will work both within the IT industry as a manager. Graduates in Economics with Information Technology could be expected to have the following generic job titles:

- systems analyst
- analyst/programmer
- software engineer
- applications developer
- web developer
- project manager
- software/hardware trainer.

Opportunities for study abroad or for placements

Compulsory part of the programme

Educational aims of the programme

To develop the students' knowledge of the practice and underlying theory of Information Technology and Business, necessary for them to secure employment as a professional in a wide variety of industries; to encourage their critical and analytical skills; and to develop their skills in applying practical concepts to the design of computer systems, and the development of Management Information Systems. The programme provides an education in economics, with compulsory elements in the economic analysis of business, while also providing the key building blocks in the core areas of the subject, including quantitative methods, allowing both empirical and theoretical analyses of economic behaviour in a business setting.

Programme Outcomes

Knowledge and Understanding

A. Knowledge and understanding of:	**Teaching/learning methods and strategies**
In Information Technology 1. Software including: 1a) Programming languages 1b) Software tools 1c) Packages 1d) Computer Applications 1e) Structuring of data and information 2. Practice 2a) Problem identification and analysis 2b) Design, development and evaluation 2c) Management and organisation 2d) Professionalism and ethics 2e) Commercial and industrial exploitation 3. Hardware 4. Communication and interaction 5. Theory Note these are the five areas identifies in the Computing benchmark. In economics: 6. The fundamental concepts and techniques of microeconomics, macroeconomics and quantitative methods. 7. The fundamental concepts and techniques of business economics and policy. 8. A more specialist application in economics.	The course concentrates on aspects 1. and 2. with teaching of all aspects involving an introduction of the aspects in theoretical manner and re-enforcement by related practical work, with the first year providing the core, subsequent years involve deeper study, with the student concentrating on a single theme in their final year. Aspects 3 and 4. feature within the COTS themes particularly from a practical perspective. Aspects 3, 4. and 5. are presented as supporting material and taught in the context of aspects 1. and 2. as and when they are needed. *Assessment* Knowledge is tested through a mixture of formal examinations and practical work. In economics, the knowledge required for the basic topics is discussed in formal lectures supported by smaller group discussions on set questions. This pattern is also followed in the more specialist options with the non-assessed work required varying according to the nature of the subject matter. *Assessment* Most knowledge is tested through a combination of coursework and unseen formal examinations. Short tests and oral presentations also contribute.

Skills and other attributes

B. Intellectual skills – able to: In Information technology: 1. Demonstrate knowledge and understanding related to aspects outlined above. 2. Apply such knowledge and understanding to the modelling of computer systems. 3. Recognise and analyse criteria and specifications appropriate to a specific problem. 4. Critically evaluate and test a computer based system. 5. Deploy appropriate methods and tools for creating computer systems. 6. Reflect and communicate 7. Recognise and conform to appropriate professional, ethical and legal practices In economics: 8. Think logically 9. Apply analytical principles to a range of problems 10. Organise tasks into a structured form. 11. Assess the impact of recent and current changes on business and economic circumstances. 12. Transfer appropriate techniques and knowledge from one topic within the subject matter to another 13. Plan, organise and write a report on an independent project	**Teaching/learning methods and strategies** 1. and 2. As above. 3., 4. and 5. will be taught as part of the themes; Software Engineering; Programming and Design and COTS. The taught element will be re-enforced by practical work. 6. will be taught as part of COTS 1 and E-Business 1, throughout the course the students will be expected to use these skills and they will be particularly exercised in the individual Project. 7. will be pervasive throughout the course but be covered specifically in the Software Engineering theme and the compulsory material in the final year. *Assessment* These skills are tested through a mixture of formal examinations, presentations, reports and practicals. The individual project provides a major piece of work in which among other things the student will be assessed on their abilities to reflect and communicate. Oral presentations will be required in the Software Engineering and COTS themes and the Project, in the latter the presentation will be assessed by two members of staff not involved in the supervision of the Project. In economics, the need to think logically and analytically permeates the compulsory modules in the programme. The quality of the analysis depends on a strict focus on the central features of a problem. The more specialist topics provide many opportunities to apply this core approach to a range of problems in a wide variety of contexts. *Assessment* 8-10 are covered extensively in the core modules; 11-12 are given wide scope in the optional modules; 13 is assessed directly by means of essays prepared in Parts 2 and 4 in all modules.

C. Practical skills – able to:
In Information Technology:
1. Specify, design and construct computer-based systems.
2. Evaluate systems
3. Recognise Risks and Safety aspects
4. Effectively deploy software tools
5. Operate computing equipment effectively

In economics:
6. Understand and develop a chain of economic reasoning
7. Formulate and analyse business economics problems
8. Interpret and assess econometric results
9. Write critical analyses of business economic questions
10. Undertake a set of tasks associated with improving their career prospects

Teaching/learning methods and strategies
1. will be covered both theoretically and practically, particularly in the Programming and Design themes.
2. will be particularly covered as part COTS themes.
3. Theoretical aspects of risk and safety, the compulsory material in the final year will also cover managerial aspects. Practical aspects will be presented in the IT themes.
4. will be covered theoretically and practically as part of the COTS, Programming and Design and Software Engineering themes.
5. will be covered as part the COTS theme in a theoretical and practical manner.
Assessment
Skills 1. to 5. will be assessed by a mixture of practical work and examination.

In economics the compulsory subjects concentrate on formal economic and econometric reasoning. Problem solving forms an important part of class work especially in Parts 2 and 4.
The specialised options involve writing detailed assessments of set topics.

Assessment
Most skills are tested through a combination of coursework, including both problem solving and essays, and through unseen examinations.
The career skills component at 5 will be assessed according to the module description of the Careers Advisory Services CMS module for the Faculty of Letters and Social Sciences, distributed model.

D. Transferable skills – able to:
In Information Technology:
1. Effectively retrieve information
2. Present cases in a quantitative dimension.
3. Manage own learning and development.
4. Appreciate the need for continuing professional development (CPD), be able to plan and execute their own CPD
5. Organise and work as part of a team.
6. Plan and manage their own careers.
7. Communicate in a manner appropriate to the situation.
8. Effectively use Information Technology.

In economics:
9. Communicate ideas in a logical way
10. Give oral presentations
11. Contribute to group discussions of a business problem
12. Use library resources both on- and off-line
13. Manage time
14. Plan career strategy

15. Ability to function in the work place

Teaching/learning methods and strategies
1. Information retrieval will be covered theoretically and by practical work necessitating the use of browsers and search engines. It will be first introduced in COTS 1 but exercised extensively elsewhere.
2. Numerical skills will be introduced as needed and used in programming examples and project planning. They will also be exercised in the COTS 1.
3. Time management and organisational skills will be taught as part of Software Engineering. The students will also be expected to use a number of on-line learning tools. Tutorial support for self managed learning will be provided in COTS 1.
4. Professionalism will be an important issue throughout the course. Students will be encouraged to join the BCS and participate in local meetings.
5. The theory of team work will be covered, in Software Engineering, and the students required to undertake a piece of group work
6. The University's Careers management skill module component will be included in the second year of the Software Engineering theme.
7. The role of written and verbal communications will be covered in the COTS and Software Engineering themes.
8. Information Technology will be used throughout the course. The COTS theme will specifically include the use of Information Technology.
Assessment
1. to 3., 5. to 8. will be assessed by a mixture of practical work, presentations, reports and examinations. 4. will be assessed by formal examination. Communication skills (7.) will also be assessed with the Individual Project. In economics, seminars in Parts 2 and 3 involve group discussions and oral presentations. Library resources have to be used continuously in the preparation of essays and project work. The highly structured system of deadlines for assessed work requires good time management
Assessment
Most skills are tested indirectly through the preparation of course and project work.
15. Is provided by the work placement and assessed through reports and oral examination.

Please note - 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 each module can be found in the module description and in the programme handbook. The University reserves the right to modify this specification in unforeseen circumstances, or where the process of academic development and feedback from students, quality assurance processes or external sources, such as professional bodies, requires a change to be made. In such circumstances, a revised specification will be issued.