UNIVERSITY OF NEWCASTLE UPON TYNE

FACULTY OF SCIENCE, AGRICULTURE & ENGINEERING

DEGREE PROGRAMME SPECIFICATION

1.	**Awarding Institution**	University of Newcastle upon Tyne
2.	**Teaching Institution**	University of Newcastle upon Tyne
3.	**Final Award**	BSc (Hons)
4.	**Programme Title**	Information Systems (JH component)
5.	**Programme Accredited by:**	N/A
6.	**UCAS Code**	NG55, GG35, GL51
7.	**QAA Benchmarking Group(s)**	Computing
8.	**Date of production/revision**	29/9/04

9. Programme Aims:

The aims of this programme are a subset of those for the Single Honours Degree in Information Systems. As such, students will have less breadth, but they will be able to follow some topics in depth.

- To produce graduates who will be well suited to developing applications of IT, building on standard software and hardware platforms, and understanding and performing computer system administration. They will have a *depth* of knowledge of key computing science topics. We envisage them going on to employment in an administrative/commercial environment doing system management or applying their Information System skills in that environment. They would also be well-suited to what we see as a growing market in the development of material for network information services, electronic publishing and similar areas.
- To provide a programme which meets the FHEQ at Honours level and which takes appropriate account of the subject benchmark statements in Computing.

10. Intended Learning Outcomes; Teaching and Learning Strategies and Methods; Assessment Strategies and Methods

A Knowledge and understanding

A successful student will have gained and be able to demonstrate knowledge and understanding of:
A1. A range of programming paradigms and languages
A2. A number of applications within Computing Science
A3. The principles of software engineering
A4. Communicating information

Teaching & Learning Strategy

Lectures are the main way of imparting knowledge and understanding (A1-A4), but tutorials are also used. Practical classes feature prominently, especially to support the Stage 1 programming modules (A1,

A3). Students are expected to contribute to their own learning experience by independent reading. They are provided with references to books which are categorised as essential, recommended, and background reading, as well as scientific papers and other learning materials including appropriate web URLs.

Assessment strategy
Knowledge and understanding are assessed by means of closed and open book written examinations, and coursework, including group and individual project reports (A1-A4).

B Subject-specific/professional skills
A successful student will be able to understand and undertake:
B1. The process of software development
B2. The use of hardware and software systems
B3. The use and provision of network information services
B4. The use of a variety of programming languages and paradigms
B5. The analysis of system requirements and the production of system specifications
B6. The design and implementation of user interfaces
B7. The introduction, customisation and management of IT systems
B8. Giving advice and support to users in the operation of their IT systems

Teaching & Learning Strategy
B1-B8 feature prominently in all modules, where coursework is used to develop these skills.

Assessment strategy
Subject-specific and professional skills are assessed by coursework (B1-B8).

C Cognitive skills
A successful student will have:
C1. The ability to conduct investigations using the technical and professional literature
C2. The ability to use and evaluate appropriate tools and techniques
C3. The ability to undertake empirical evaluation of alternative solutions
C4. The ability to formulate problems and identify suitable approaches to solving them

Teaching & Learning Strategy
All modules involve coursework, much of which involves problem solving skills (C4), where students need to select, evaluate and apply appropriate tools and techniques (C2). Here and elsewhere students will need to investigate possible alternatives in the technical and professional literature (C1, C3).

Assessment strategy
Cognitive skills are assessed by a range of coursework (reports, design documents, etc.) (C1-C4).

D Key (transferable) skills
A successful student will be able to use the following skills:
D1. Written communication
D2. Problem solving
D3. Interpersonal communication
D4. Initiative
D5. Oral presentation
D6. Adaptability
D7. Teamwork

D8. Numeracy
D9. Planning and organisation
D10. Computer literacy

Teaching & Learning Strategy

Key skills feature throughout the programme; teamwork, oral presentation, interpersonal communication and planning and organisation in the module on Information Handling (D3, D5, D7, D9); all students will have a basic level of numeracy (at least a C in GCSE Maths) and these skills are used and developed by exercises in the programming modules and in the second year module on information handling (D8); written communication in all modules (D1); problem solving, interpersonal communication, initiative, computer literacy, problem solving, initiative and adaptability are necessarily covered throughout the programme (D2, D4, D6, D10).

Assessment strategy

Key (transferable) skills are assessed by both written and oral presentations, in particular in the Stage 2 Information Handling module (D1-D10).

11 Programme Features, Structure and Curriculum

A & B Programme Features & Structure

Students study 60 credits of compulsory modules in Stages 1 and 2, take 30 compulsory credits and choose from a range of optional Computing modules at Stage 3.

The following combinations of subjects (followed by their UCAS Codes) are permitted:

Accounting and	Information Systems	NG55
Economics and	Information Systems	GL51
Information Systems and	Statistics	GG35

C Programme Curriculum

Stage 1

(a) All candidates shall select, subject to the approval of the Degree Programme Director, modules to a total value of at least 40 credits from each of the subjects of the degree; these will be regarded as core modules. The choice of modules available in each subject is set out in the relevant Degree Programme Handbook. For Information Systems these are:

Code	*Credits*	*Descriptive title*
CSC165	(20)	The IT Professional in Today's Society
CSC171	(20)	Introduction to Imperative Programming Techniques
CSC172	(20)	Object-Oriented Techniques, Data Structures and Algorithms

(b) All candidates shall select, subject to the approval of the Degree Programme Director, further modules with a total value of 40 credits.

Note: a list of the Stage 0 and Stage 1 modules offered by other schools in the Faculty will be found in the List of Modules *given in the University* Regulations *at www.ncl.ac.uk/regulations on the World Wide Web. Candidates may also, in certain circumstances, be given permission by the Degree Programme Director to study modules offered by schools in other faculties.*

Stage 2

(a) All Stage 2 modules are Honours modules.

(b) Subject to the approval of the Degree Programme Director for the relevant Honours programmes, all candidates shall select modules to a total value of 60 credits in each subject of the degree. The choice of modules available in each subject is set out in the relevant Degree Programme Handbook. For Information Systems these are:

Code	*Credits*	*Descriptive title*
CSC262	(20)	Requirements Analysis and Database Design
CSC267	(20)	Information Handling
CSC268	(20)	Program Design and Prototyping

Note: the Degree Programme Director for the Joint Honours degree may, where appropriate, permit a candidate to substitute modules up to the value of 20 credits offered by another school.

Stage 3

(a) All Stage 3 modules are Honours modules.

(b) Subject to the approval of the Degree Programme Director for the relevant Honours programmes, all candidates shall select modules to a total value of 60 credits in each subject of the degree. The choice of modules available in each subject is set out in the relevant Degree Programme Handbook. For Information Systems these are:

Compulsory modules:

Code	*Credits*	*Descriptive title*
CSC307	(10)	Human-Computer Interaction
CSC308	(10)	Software Project Management
CSC360	(10)	System Administration

Optional modules:

Code	*Credits*	*Descriptive title*
CSC311	(10)	Reliability and Fault Tolerance
CSC338	(10)	Evolution of Complex Systems
CSC361	(10)	Web Design: Principles and Practice

Note: the Degree Programme Director for the Joint Honours degree may, where appropriate, permit a candidate to substitute modules up to the value of 20 credits either by modules offered by another school.

Development of specific Intended Learning Outcomes occurs through the following modules (compulsory modules in bold text, optional modules in normal, italic text)

A1.	A range of programming paradigms and languages	**CSC171, CSC172, CSC262, CSC268, CSC360,** *CSC361***.**
A2.	A number of applications within Computing Science	**CSC171, CSC172, CSC262, CSC268,** *CSC338,* **CSC360.**
A3.	The principles of software engineering	**CSC171, CSC172, CSC262, CSC268, CSC307, CSC308,** *CSC311.*
A4.	Communicating information	**CSC262, CSC267, CSC307,** *CSC338,* **CSC360,** *CSC361***.**
B1.	The process of software development	**CSC171, CSC172, CSC262, CSC268, CSC308,** *CSC311.*
B2.	The use of hardware and software systems	**CSC171, CSC172, CSC262, CSC268,** *CSC311,* **CSC360,** *CSC361***.**
B3.	The use and provision of network information services	**CSC165, CSC262, CSC268, CSC307, CSC360,** *CSC361***.**
B4.	The use of a variety of programming languages and paradigms	**CSC171, CSC268, CSC360,** *CSC361***.**
B5.	The analysis of system requirements and the production of system specifications	**CSC262, CSC268, CSC307.**
B6.	The design and implementation of user interfaces	**CSC267, CSC268, CSC307,**

		CSC360, *CSC361*.
B7.	The introduction, customisation and management of IT systems	**CSC262, CSC307, CSC360,** *CSC361*.
B8.	Giving advice and support to users in the operation of their IT systems	**CSC307, CSC360,** *CSC361*.
C1.	The ability to conduct investigations using the technical and professional literature	**CSC165, CSC262, CSC267, CSC268, CSC307,** *CSC311, CSC338,* **CSC360,** *CSC361*.
C2.	The ability to use and evaluate appropriate tools and techniques	**CSC165, CSC172, CSC262, CSC267, CSC268, CSC307,** *CSC338,* **CSC360,** *CSC361*.
C3.	The ability to undertake empirical evaluation of alternative solutions	**CSC165, CSC262, CSC268, CSC307,** *CSC338*.
C4.	The ability to formulate problems and identify suitable approaches to solving them	**CSC171, CSC172, CSC262, CSC268, CSC307,** *CSC311, CSC338,* **CSC360,** *CSC361*.
D1.	Written communication	**CSC165, CSC262, CSC267, CSC268, CSC307, CSC308,** *CSC311, CSC338,* **CSC360.**
D2.	Problem solving	**CSC165, CSC171, CSC172, CSC262, CSC267, CSC268, CSC307,** *CSC311, CSC338,* **CSC360,** *CSC361.*
D3.	Interpersonal communication	**CSC165, CSC267, CSC268, CSC307, CSC308,** *CSC338,* **CSC360.**
D4.	Initiative	**CSC165, CSC171, CSC172, CSC262, CSC267, CSC268, CSC307,** *CSC311, CSC338,* **CSC360,** *CSC361.*
D5.	Oral presentation	**CSC165, CSC267, CSC307,** *CSC338.*
D6.	Adaptability	**CSC165, CSC268, CSC307,** *CSC338,* **CSC360,** *CSC361.*
D7.	Teamwork	**CSC165, CSC307, CSC308,** *CSC338.*
D8.	Numeracy	**CSC267, CSC268, CSC307, CSC360,** *CSC361.*
D9.	Planning and organisation	**CSC165, CSC171, CSC172, CSC262, CSC268, CSC307, CSC308,** *CSC338,* **CSC360,** *CSC361.*
D10.	Computer literacy	**CSC165, CSC171, CSC172, CSC262, CSC267, CSC268, CSC307,** *CSC311,* **CSC360,** *CSC361.*

12 Criteria for Admission:

GCSEs required
Minimum Grade C GCSE Mathematics

A-Level Subjects and Grades
This varies according to particular JH combination, but typically BBB at A2.

Alternative entry qualifications
We accept a wide range of alternative qualifications, such as IB 30 points, Distinction at GNVQ, BTEC to include 6 merits, Scottish Highers BBBB.

Admissions policy
Applications are considered by the Degree Programme Director for the Joint Honours degree. Suitable applicants are usually made an offer without interview as soon as possible after their application forms have been received and considered. In some cases, however, e.g. where an applicant has non-standard qualifications, an interview may be necessary before a decision is made. Applicants are invited to a JH Visit Day, during which they are able to visit the relevant Schools to see the University and to meet staff and current undergraduates on the programme. Attendance is strongly encouraged but not compulsory and applicants who are not based in the UK are not expected to attend.

Arrangements for non-standard entrants
Potential students are interviewed either in person or over the phone to assess their suitability for the programme.

Any Additional Requirements
None

13 Support for Students and their Learning:

Induction
The first week of the first term/semester is an Induction Week with no formal teaching. During this period all students attend an induction programme in which they will be given detailed programme information relating to their Stage and the timetable of lectures/practicals/labs/ tutorials/etc. In particular all new students will be given general information about the School and their course, as described in the Degree Programme Handbook. The International Office offers an additional induction programme for overseas students (see http://www.ncl.ac.uk/international/coming_to_newcastle/orientation.phtml).

Study skills support
Students will learn a range of Personal Transferable Skills, including Study Skills, as outlined in the Programme Specification. Some of this material, e.g. time management is covered in the appropriate Induction Programme.

Academic support
The initial point of contact for a student is with a lecturer or module leader, or their tutor (see below) for more generic issues. Thereafter the Degree Programme Director or Head of School may be consulted. Issues relating to the programme may be raised at the Staff/Student Committee, and/or at the Board of Studies.

Pastoral support
All students are assigned a personal tutor whose responsibility is to monitor the academic performance and overall well-being of their tutees. Details of the personal tutor system can be found at http://www.ncl.ac.uk/undergraduate/support/tutor.phtml. In addition the University offers a range of support services, including the Student Advice Centre, the Student Counselling Service, the Mature Student Support Service, and a Childcare Support Officer, see http://www.ncl.ac.uk/undergraduate/support/welfare.phtml.

Support for Special Needs
Support for students with special needs is provided as required and the University's Disability Support Service can be consulted where appropriate. For further details see http://www.ncl.ac.uk/undergraduate/support/disability.phtml.

Learning resources
The University's main learning resources are provided by the Robinson and Walton Libraries (for books, journals, online resources), and Information Systems and Services, which supports campus-wide computing facilities, see http://www.ncl.ac.uk/undergraduate/support/acfacilities.phtml.
All new students whose first language is not English are required to take an English Language test in the Language Centre. Where appropriate, in-sessional language training can be provided. The Language Centre houses a range of resources for learning other languages which may be particularly appropriate for those interested in an Erasmus exchanges. See http://www.ncl.ac.uk/undergraduate/support/langcen.phtml.
The School of Computing Science has well equipped computer laboratories consisting of networked PCs with dedicated labs for each stage of the programme. Key software used in the support and delivery of the programme is available to students free of charge. The School has its own library which is mainly used for the support of advanced topics in the later stages of the programme. The University's Robinson Library has available multiple copies of all recommended undergraduate texts.

14 Methods for Evaluating and Improving the Quality and standards of Teaching and Learning:

Module reviews
All modules are subject to review by questionnaires which are considered by the Board of Studies. Changes to, or the introduction of new, modules are considered at the School Teaching and Learning Committee and at the Board of Studies. Student opinion is sought at the Staff/Student Committee and/or the Board of Studies. New modules and major changes to existing modules are subject to approval by the Faculty Teaching and Learning Committee.

Programme reviews
The Board of Studies conducts an Annual Monitoring and Review of the degree programme and reports to Faculty Teaching and Learning Committee.

External examiner reports
External Examiner reports are considered by the Board of Studies under Reserved Business, in the absence of the student representatives. The Board responds to these reports through Faculty Teaching and Learning Committee. For JH programmes the External Examiner for each half reports to the JH Board of Examiners where an External Assessor oversees the process.

Accreditation reports
This programme is not accredited by any professional body.

Student evaluations
All modules, and the degree programme, are subject to review by student questionnaires. Informal student evaluation is also obtained at the Staff/Student Committee, and the Board of Studies.

Feedback mechanisms
Feedback to students is effected via the Staff/Student Committee and the Board of Studies.

Faculty and University Review Mechanisms

The Programme is subject to the University's Internal Subject Review programme, see http://www.ncl.ac.uk/internal/academic-quality/qualityhome.htm#2.

15 Regulation of Assessment:

Pass Marks
The pass mark, as defined in the University's Undergraduate Examination Conventions (http://www.ncl.ac.uk/calendar/university.regs/ugexamconv.pdf), is 40.

Course Requirements
Progression is subject to the University's Undergraduate Progress Regulations (http://www.ncl.ac.uk/calendar/university.regs/ugcont.pdf) and Undergraduate Examination Conventions (http://www.ncl.ac.uk/calendar/university.regs/ugexamconv.pdf). In summary, students must pass 120 credits at each Stage. Limited compensation down to 35 is possible at each Stage and there are resit opportunities, with certain restrictions.

Weighting of Stages
Modules taken at Stages 2 and 3 are Honours modules and the two stages contribute to the award of the final degree in the ratio 50:50.

Common Marking Scheme
The University employs a common marking scheme, which is specified in the Undergraduate Examination Conventions (http://www.ncl.ac.uk/calendar/university.regs/ugcont.html), namely

	Honours	**Non-honours**
<40	Fail	Failing
40-49	Third Class	Basic
50-59	Second Class, Second Division	Good
60-69	Second Class, First Division	Very Good
70+	First Class	Excellent

Role of the External Examiner
An External Examiner, a distinguished member of the subject community, is appointed by Faculty Teaching and Learning Committee, after recommendation from the Board of Studies. The External Examiner is expected to:

See and approve examination papers
Moderate examination and coursework marking
Attend the June Board of Examiners
Report to the University on the standards of the programme

16 Indicators of Quality and Standards:

Professional Accreditation Reports
Not applicable

Internal Review Reports
This programme was covered by the Internal Subject Review of the School of Computing Science held on 28/29th April 2003 and was subsequently approved by Faculty Teaching and Learning Committee and University Teaching and Learning Committee.
The overall judgement was that "The team was impressed by the very positive relationships between the

staff and students in the School - it was abundantly clear that the subject group is very student-focused and this was to their significant credit, with students commenting favourably about the approachable nature of the staff as a whole. The overall provision was felt to be excellent, with a significant number of commendations relating to good practice in the School, which others may wish to consider and incorporate into their own procedures."

Previous QAA Reports
Computing Science was adjudged *Satisfactory* in 1994, however Joint Honours including Information Systems was not taught at that time.

This specification provides a concise summary of the main features of the programme and of the learning outcomes that a typical student might reasonably be expected to achieve if she/he takes full advantage of the learning opportunities provided. The accuracy of the information contained is reviewed by the University and may be checked by the Quality Assurance Agency for Higher Education.

17 Other Sources of Information:

The University Prospectus (see http://www.ncl.ac.uk/undergraduate/)

The School Prospectus (see http://www.ncl.ac.uk/undergraduate/subjects/computing)

The University and Degree Programme Regulations (see http://www.ncl.ac.uk/calendar/pdf/uniregs.pdf and http://www.ncl.ac.uk/calendar/sae/)

The Degree Programme Handbooks

QAA Subject Review Report