	PROGRAMME SPECIFICATION	Newcastle University

1	Awarding Institution	Newcastle University
2	Teaching Institution	Newcastle University
3	Final Award	BSc (Hons)
4	Programme Title	Information Systems Information Systems with Accounting Information Systems with Business Studies Information Systems with Management Information Systems (Industrial Placement) Information Systems with Accounting (Industrial Placement) Information Systems with Business Studies (Industrial Placement) Information Systems with Management (Industrial Placement)
5	UCAS/Programme Code	G500, G5N4, G5N1, G5N2, G504, G5NK, G5NC, G5NF
6	Programme Accreditation	British Computer Society
7	QAA Subject Benchmark(s)	Computing
8	FHEQ Level	6
9	Date written/revised	31 May 2011

10	Programme Aims

1. 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, supplemented by a breadth of knowledge that encompasses other subject areas such as economics, accounting, business management or law, or skills in a modern language (e.g. French, Spanish). We envisage them going on to employment in an administrative/commercial environment doing system management or applying their Information Systems 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

2. To provide a flexible programme that allows students to specialise in particular areas:

   a. Students with a degree in Information Systems with Accounting or Information Systems with Accounting (Industrial Placement) will additionally have an understanding of the discipline of accounting and its regulatory frameworks, experience of elementary accounting reporting systems and an understanding of advanced topics such as management accounting and taxation.

   b. Students with a degree in Information Systems with Management or Information Systems with Management (Industrial Placement) will additionally have understanding of management theory and practice and be able to demonstrate management skills, together with an understanding of advanced topics such as e-business and human resource management.

3. Students with a degree in Information Systems with Business Studies or Information Systems with Business Studies (Industrial Placement) will additionally have a breadth of understanding of topics in Marketing.To provide a programme that equips students

with subject-specific and transferable skills that will enable them to pursue a variety of careers within, and outside, the IT industry, including research.

4. To provide a programme which meets the accreditation requirements of appropriate professional bodies, thus providing the basis for further professional development and lifelong learning.

5. To provide a programme which meets the FHEQ at Honours level and which takes appropriate account of the subject benchmark statements in Computing.

6. For those students taking a programme with industrial placement, to provide students with the opportunity to develop their skills within an industrial setting.

11   Learning Outcomes

The programme provides opportunities for students to develop and demonstrate knowledge and understanding, qualities, skills and other attributes in the following areas. The programme outcomes have references to the benchmark statements in Computing.

Knowledge and Understanding

On completing the programme students should have gained and able to demonstrate knowledge and understanding of:

A1.   A diverse range of programming paradigms and languages supported by programming language principles

A2.   The principles of software engineering

A3.   Professional issues, including legal and ethical aspects of professional practice, professional development, social roles and effects of computing systems

A4.   Communicating information

A5.   Research techniques

A6.   Techniques for distributed and Internet programming

A7.   Advanced knowledge of modern software engineering processes

A8.   Knowledge of basic principles of advanced software CASE tools

A9.   Awareness of software project management techniques

A10. Understanding of legal issues affecting software projects

A11. Other subject areas as appropriate to the specialism and/or choice of modules from other Schools

Teaching and Learning Methods

Lectures are the main way of imparting knowledge and understanding (A1-A11), but tutorials are also used. Practical classes feature prominently, especially to support the Stage 1 programming modules (A1, A2). Visiting speakers provide seminars on aspects of being an IT professional (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. In addition, an industrial placement will involve the development of knowledge within an industrial setting.

Assessment Strategy

Knowledge and understanding are assessed by means of closed and open book written examinations, and coursework, including team and individual project reports and log books (A1-A11).

Intellectual Skills

On completing the programme students should be able to understand and undertake:

B1.   Carrying out the process of software development, including: the analysis of system

requirements: the production of system specifications using appropriate models and techniques

B2.   The use of a variety of advanced (especially object-oriented) programming languages and paradigms

B3.   The use of a variety of advanced computer-based (including operating) systems

B4.   The use and provision of network information services

B5.   The use of a variety of programming languages and paradigms

B6.   The design and implementation of user interfaces

B7.   The introduction, customization and management of IT systems

B8.   Giving advice and support to users in the operation of their IT systems

B9.   The identification and implementation of appropriate algorithms and data structures

B10. Project management skills, including estimation and planning

B11. The application of IT systems to other subject areas depending on specialism

B12. Designing and building realistic distributed systems and Internet applications

B13. Integration of a wide variety of protocols and platforms

B14. Other skills as appropriate to the specialism and/or choice of modules from other Schools

Teaching and Learning Methods

A team project at Stage 2 gives students experience of working with others to engineer a complex piece of software (B1-B10). When taken, the industrial placement will require students to produce solutions to a customer's requirements (B1-B10). An individual project at Stage 3 requires students to relate their IT knowledge, experience and skills to a different subject area (B14). In all other modules coursework is used to develop many of these skills (B1-B13). Appropriate teaching and learning strategies are employed by external Schools to develop relevant skills (B14).

Assessment Strategy

Subject-specific and professional skills are assessed by coursework (B1-B14).

Practical Skills

On completing the programme students 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 solve problems by identifying suitable approaches to using computer-based systems.

Teaching and Learning Methods

All modules involve coursework, much of which involves problem solving skills (C4). This is especially so in the team and individual projects and, when taken, the industrial placement 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

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

Transferable/Key Skills

On completing the programme students should 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 and Learning Methods

Key skills feature throughout the programme; teamwork in the Stage 2 team project (D7); oral presentation, interpersonal communication, and planning and organisation in the module on Information Handling, and the final year project module, as well as the Stage 2 team project and when taken, the industrial placement (D3, D5, D9); written communication in all modules, but especially in the final year project (D1); 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); 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). Teamwork in the Stage 2 team project is assessed both by the module leader at team oral presentations and by a team monitor (a member of teaching staff) who attends team formal meetings (D5, D7). When taken, the industrial placement is assessed by the Module Leader with input from an industrial supervisor and on a pass/fail basis. No resit opportunity is available. Students who fail the placement are able to proceed to Stage 3 of the corresponding "without Industry" programme.

| 12 | Programme Curriculum, Structure and Features |

Basic structure of the programme

This programme has 3 Stages and when an industrial placement is taken, an intercalating year between stages 2 and 3. Students are required to take 120 credits at each Stage (except during an intercalating year).

At each Stage students take 80 compulsory credits worth of Computing Science modules and a further 40 credits of non-Computing modules.The diet of modules taken must be agreed by the Degree Programme Director who will need to ensure that a sufficient number of modules are taken at an advanced level.

A range of optional Computing Science modules is available at Stage 3 from which students choose at least one module, however all students must take the 40-credit individual project module CSC3595.

Key features of the programme (including what makes the programme distinctive)

Students may elect to study one or two semesters of their final year abroad at one of our ERASMUS partner institutions.

Students taking one of the industrial placement degrees will take an industrial placement year between Stages 2 and 3.

To gain BCS accreditation students are required to have studied Stages 2 and 3 at the Newcastle campus. Students must have also passed a problem-solving project at the first attempt.

Programme regulations (link to on-line version)
http://www.ncl.ac.uk/regulations/programme/2011-2012/comp.php

13   Criteria for admission

Entry qualifications

Minimum Grade C GCSE Mathematics

A Levels

ABC/BBB (not General Studies). GCSE Mathematics grade C required.

Scottish Qualifications

BBBBB at Higher Grade. Mathematics required at grade 2 Standard Grade (or Intermediate 2 equivalent) if not offered at Higher Grade. Combinations of Highers and Advanced Highers accepted.

International Baccalaureate

A minimum of 30 points in the IB Diploma. Standard Level Mathematics or Mathematical Studies required at grade 4 if not offered at Higher Level.

Irish Leaving Certificate

ABBBB

Access Qualifications

A unit in Mathematical Studies is essential. At least 15 level 3 credits in a science subject at Distinction. In addition, at least 30 level 3 credits at a minimum of Merit.

BTEC Level 5 HND

Applicants will be considered on an individual basis.

BTEC Level 3 Extended Diploma (formerly BTEC National Diploma)

Applicants will be considered on an individual basis.

Advanced Diploma

Advanced Diploma in the following lines of learning acceptable: Business, Administration & Finance; Engineering; and Information Technology. Minimum grade B in Principal Learning and Extended Project required, and minimum grade B in a numerate A level (e.g. Mathematics, Physics, Chemistry, Computing, IT). GCSE Mathematics required at minimum grade C if not offered at a higher level.

Cambridge Pre-U

D3,M2,M3/M2,M2,M2 in Principal Subjects. GCSE Mathematics grade C required.

Admissions policy/selection tools
Applicants are invited to visit the School for interview and to see the University and to meet 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.

Additional Requirements
None.

Level of English Language capability
For applicants whose first language is not English we ask for IELTS 6.5 or TOEFL 233 (computer-based).

14	Support for Student Learning

Induction
During the first week of the first semester students attend an induction programme. New students will be given a general introduction to University life and the University's principle support services and general information about the School and their programme, as described in the Student Handbook and their Degree Programme Handbook. New and continuing students will be given detailed programme information and the timetable of lectures/practicals/labs/tutorials/etc. The International Office offers an additional induction programme for overseas students.

Study skills support
Students will learn a range of Personal Transferable Skills, including Study Skills, as outlined in this Programme Specification. Some of this material, e.g. time management is covered in the appropriate Induction Programme. Students are explicitly tutored on their approach to both team and individual projects. Specific help is available to improve writing skills:

http://www.ncl.ac.uk/students/wdc/learning/

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.

Industrial Placement (when taken)
During the industrial placement, students will have a supervisor from the School as well as an industrial supervisor as detailed in the School's Placement Handbook.

Pastoral support
All students are assigned a personal tutor whose responsibility is to monitor the academic performance and overall well-being of their tutees. In addition the University offers a range of support services, including the Student Advice Centre, the Counselling and Wellbeing team, the Mature Student Support Officer, and a Childcare Support Officer. For details of all student support services see:

http://www.ncl.ac.uk/undergraduate/life/support/

Support for students with disabilities
The University's Disability Support Service provides help and advice for disabled students at the University - and those thinking of coming to Newcastle. It provides individuals with: advice about the University's facilities, services and the accessibility of campus; details about the technical support available; guidance in study skills and advice on financial support arrangements; a resources room with equipment and software to assist students in their

studies. For further details see:

http://www.ncl.ac.uk/students/wellbeing/disability-support/

Learning resources
The University's main learning resources are provided by the Robinson and Walton Libraries (for books, journals, online resources), (http://www.ncl.ac.uk/library/) and Information Systems and Services, which supports campus-wide computing facilities:

(http://www.ncl.ac.uk/iss/teaching/)

The School of Computing Science has well equipped computer laboratories consisting of networked PCs with dedicated labs for each stage of the programme. In particular the School hosts a videoconferencing suite, funded through the HEFCE Centre of Excellence in Teaching and Learning programme. Key software used in the support and delivery of the programme is available to students free of charge. The University's Robinson Library has available multiple copies of all recommended undergraduate texts. Many of the reading list books are available free of charge online.

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 exchange (http://www.ncl.ac.uk/langcen/).

15	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 Staff Student Committee and 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, Learning and Student Experience Committee.

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

External Examiner reports
External Examiner reports are considered by the Board of Studies. The Board responds to these reports through Faculty Teaching, Learning and Student Experience Committee.

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. The National Student Survey is sent out every year to final-year undergraduate students, and consists of a set of questions seeking the students' views on the quality of the learning and teaching in their HEIs. Further information is at www.thestudentsurvey.com/ With reference to the outcomes of the NSS and institutional student satisfaction surveys actions are taken at all appropriate levels by the institution.

Mechanisms for gaining student feedback
Feedback is channelled 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 process, see
http://www.ncl.ac.uk/quilt/assets/documents/qsh-isr-policy.pdf

Accreditation reports
All the programmes covered by this Degree Programme Specification were accredited by the British Computer Society in October 2008.

Additional mechanisms
None.

16	Regulation of assessment

Pass mark
The pass mark is 40.

Course requirements
Progression is subject to the University's Undergraduate Progress Regulations and Undergraduate Examination Conventions (http://www.ncl.ac.uk/regulations). In summary, students must pass, or be deemed to have passed, 120 credits at each Stage. Limited compensation up to 40 credits and down to a mark of 35 is possible at each Stage and there are resit opportunities, with certain restrictions.

Weighting of stages
The marks from Stages 2 and 3 will contribute to the final classification of the degree
The weighting of marks contributing to the degree for Stages 2 and 3 is 50 : 50

Common Marking Scheme
The University employs a common marking scheme, which is specified in the Undergraduate Examination Conventions, namely

	Modules used for degree classification	Modules not used for degree classification
<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, Learning and Student Experience 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 Board of Examiners
        Report to the University on the standards of the programme

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In addition, information relating to the programme is provided in:

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

The School Brochure http://www.ncl.ac.uk/computing/

The University Regulations (see http://www.ncl.ac.uk/regulations/docs/)

The Degree Programme Handbook
(see https://www.cs.ncl.ac.uk/teaching/handbooks/current/

Please note. 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.

Mapping of Intended Learning Outcomes onto Curriculum/Modules

Intended Learning Outcome	Module codes (Compulsory in Bold)
A1	**CSC1011, CSC1014, CSC1016, CSC2513, CSC2015, CSC2511, CSC3501,** CSC3504, **CSC3595**
A2	**CSC1011, CSC1014, CSC2513, CSC2015, CSC2511, CSC3003,** CSC3002, **CSC3303, CSC3595**
A3	**CSC1014, CSC1015, CSC2015, CSC2511, CSC2512, CSC3003,** CSC3006, **CSC3303, CSC3501,** CSC3504
A4	**CSC1014, CSC1016, CSC2513, CSC2015, CSC2512, CSC3003,** CSC3006, **CSC3501,** CSC3504, **CSC3595**
A5	**CSC3595**
A6	**CSC1014,** CSC3504
A7	**CSC3303**
A8	**CSC3303**
A9	**CSC3303**
A10	**CSC3303,**
A11	CSC3006, non-CSCXXX modules.
B1	**CSC1011, CSC1014, CSC1016, CSC2513, CSC2015, CSC2511,** CSC3002, **CSC3303,** CSC3504, **CSC3595**
B2	**CSC1011, CSC1014, CSC1016, CSC2015, CSC2511, CSC3595**
B3	**CSC1011, CSC1014, CSC1016, CSC2513, CSC2015, CSC2511,** CSC3002, **CSC3501,** CSC3503, CSC3504, **CSC3595**
B4	**CSC1014, CSC1015, CSC1016, CSC2513, CSC2015, CSC2511, CSC3003, CSC3501,** CSC3504,
B5	**CSC1011, CSC1014, CSC1016, CSC2015, CSC2511, CSC3501,** CSC3504, **CSC3595**
B6	**CSC1014, CSC1016, CSC2015, CSC2511, CSC2512, CSC3003, CSC3501,** CSC3503, CSC3504, **CSC3595**
B7	**CSC1014, CSC1015, CSC1016, CSC2513, CSC3003, CSC3501,** CSC3504
B8	**CSC1014, CSC1015, CSC3003, CSC3501,** CSC3504
B9	**CSC1011, CSC1014**
B10	**CSC2015, CSC3303, CSC3595**
B11	**CSC1014, CSC3003, CSC3501,** CSC3504
B12	**CSC1014,** CSC3504
B13	**CSC1014, CSC1016,** CSC3504
B14	non-CSCXXX modules
C1	**CSC1014, CSC1015, CSC1016, CSC2513, CSC2015, CSC2511, CSC2512,** CSC3002, **CSC3003,** CSC3006, **CSC3501,** CSC3503, CSC3504, **CSC3595**
C2	**CSC1011, CSC1014, CSC1015, CSC1016, CSC2513, CSC2015, CSC2511, CSC2512, CSC3003,** CSC3006, **CSC3501,** CSC3503, CSC3504, **CSC3595**
C3	**CSC1011, CSC1014, CSC1015, CSC1016, CSC2513, CSC2015, CSC2511, CSC3003,** CSC3006, CSC3503, **CSC3595**
C4	**CSC1011, CSC1014, CSC1016, CSC2513, CSC2015, CSC2511,** CSC3002, **CSC3003,** CSC3006, **CSC3501,** CSC3503, CSC3504, **CSC3595**
D1	**CSC1014, CSC1015, CSC1016, CSC2513, CSC2015, CSC2511, CSC2512, CSC3003,** CSC3002, CSC3006, **CSC3303, CSC3501, CSC3595**
D2	**CSC1011, CSC1014, CSC1015, CSC1016, CSC2513, CSC2015, CSC2511, CSC2512,** CSC3002, CSC3006,

	CSC3501, CSC3503, CSC3504, **CSC3595**
D3	**CSC1015, CSC2015, CSC2511, CSC2512,** CSC3006, **CSC3303, CSC3501, CSC3595**
D4	**CSC1011, CSC1014, CSC1015, CSC1016, CSC2513, CSC2015, CSC2511, CSC2512,** CSC3002, **CSC3003,** CSC3006, **CSC3501,** CSC3504, **CSC3595,**
D5	**CSC1015, CSC2015, CSC2512,** CSC3006, **CSC3595**
D6	**CSC1011, CSC1014, CSC1015, CSC1016, CSC2015, CSC2511, CSC2512,** CSC3006, **CSC3501,** CSC3504, **CSC3595**
D7	**CSC1015, CSC2015,** CSC3006, **CSC3303, CSC3501**
D8	**CSC2015, CSC2512, CSC3501,** CSC3504
D9	**CSC1011, CSC1014, CSC1015, CSC1016, CSC2513, CSC2015, CSC2512, CSC3003,** CSC3006, **CSC3303, CSC3501,** CSC3504, **CSC3595**
D10	**CSC1011, CSC1014, CSC1015, CSC1016, CSC2513, CSC2015, CSC2511, CSC2512,** CSC3002, **CSC3003, CSC3501,** CSC3504, **CSC3595**