



## **Programme Specification**

# **BSc (Hons) e-Finance**

**November 2011**

**PART A: PROGRAMME SUMMARY INFORMATION**

1.	<b>Title of Programme:</b>	e-Finance		
2.	<b>Programme Code:</b>	N300		
3.	<b>Award:</b>	BSc (Hons) e-Finance <b>360 credits including at least 90 credits at level 3 (FHEQ level 6) or higher</b>	<b>Credit 360</b>	<b>Level 6</b>
4.	<b>Other entry awards (if applicable):</b>	N/A	<b>Credit</b>	<b>Level</b>
5.	<b>Exit Awards:</b>	Diploma in Higher Education <b>240 credits including at least 90 credits at level 2 (FHEQ level 5) or higher</b>	<b>Credit 240</b>	<b>Level 5</b>
		Certificate in Higher Education <b>120 credits including at least 90 credits at level 1 (FHEQ level 4) or higher</b>	<b>120</b>	<b>4</b>
<p><b>Note:</b> Credit levels shown in the above sections and elsewhere in this programme specification relate to the levels as described in the QAA Framework for Higher Education Qualifications (FHEQ) as follows:</p> <p>M = Level 7 in the FHEQ  3 = Level 6 in the FHEQ  2 = Level 5 in the FHEQ  1 = Level 4 in the FHEQ  0 = Level 3 in the FHEQ</p>				
6.	<b>Date of first intake:</b>	September 2002		
7.	<b>Frequency of intake:</b>	Annually, in September/October		
8.	<b>Duration and mode of study:</b>	Full-time, 3 years		
9.	<b>Applicable framework:</b>	Model for Non-Clinical First Degree Programmes		
9a.	<b>Framework exemption</b>	N/A		
10.	<b>Applicable Ordinance:</b>	Ordinance 35 General Ordinance for Undergraduate Degrees Ordinance 37 Diploma in Higher Education Ordinance 38 Certificate in Higher Education		
10a.	<b>New/revised Ordinance</b>	N/A		
11.	<b>Applicable Regulations:</b>	Existing Regulations		
11a.	<b>New/revised Regulations</b>	No		
12.	<b>Level 2 School</b>	School of Electrical Engineering, Electronics, and Computer Science		
13.	<b>Faculty:</b>	Faculty of Science and Engineering		
14.	<b>Other contributors</b>	None		

	<b>from UoL:</b>	
15.	<b>Teaching other than at UoL:</b>	None
16.	<b>Director of Studies:</b>	Dr David Jackson (Department of Computer Science)
17.	<b>Board of Studies:</b>	Board of Studies in Computer Science
18.	<b>Board of Examiners:</b>	The Computer Science Undergraduate Boards of Examiners
19.	<b>External Examiner(s)</b>	Professor David Robertson (The University of Edinburgh)
20.	<b>Professional, Statutory or Regulatory Body:</b>	None
21.	<b>QAA Subject Benchmark Statement(s)</b>	Computing Finance
22.	<b>Other Reference Points:</b>	BCS Course Guidelines and Course Accreditation Criteria
23.	<b>Fees:</b>	Standard Science
24.	<b>Additional costs to students:</b>	None
25.	<b>AQSC approval:</b>	First approved June 2009

### **PART B: PROGRAMME AIMS & OBJECTIVES**

26.	<p><b>Aims of the Programme:</b></p> <p>Electronic Finance, e-Finance for short, is the provision of financial services and markets using electronic communication and computation, including, for example, electronic payments systems, the operation of financial services firms and the operation of financial markets. Computer systems, the internet and related technologies act as new distribution channels for financial services firms and allowing those firms to efficiently create and tailor new products to the needs of their customers. At the same time these technologies allow customers easy access to financial information and services from a wide range of sources and providers, thus breaking down barriers to competition between financial services firms. This creates a continuing need to innovate on the side of financial service firms and results in the demand for graduates who have both the necessary computer skills and the knowledge of financial products, financial services and the way how financial service providers operate to build e-Finance applications. The BSc in e-Finance degree programme is designed to address this demand.</p> <p>The aims of the programme are</p> <ul style="list-style-type: none"> <li>▪ to provide students with a good understanding of several areas of Information Management and Information Systems with emphasis on applications to e-Finance and, more generally, to e-Business;</li> <li>▪ to impart a broad knowledge of accounting, finance, and the use of quantitative methods in the modelling of financial products;</li> <li>▪ to enable students to become multi-skilled professionals in the field of Information and Information Systems with emphasis on e-Finance who are able to work independently as well as in teams in both research and development/application of e-Finance software.</li> </ul>
27.	<p><b>Subject-based Learning Outcomes</b></p> <p>The subject-based learning outcomes outlined below fall within the QAA Subject</p>

	<p>Benchmark for Computing, the QAA Subject Benchmark for Accounting, the draft QAA Subject Benchmark for Finance, and British Computer Society Accreditation Criteria.</p>
	<p><b>Cognitive Abilities</b></p>
	<p>To provide student with the ability to</p> <ol style="list-style-type: none"> <li>1.1 Demonstrate knowledge and understanding of essential facts, concepts, principles and theories relating to computing and computer applications as appropriate to the general programme of study and their chosen specialisation.</li> <li>1.2 Use such knowledge and understanding in the modelling and design of computer-based systems for the purposes of comprehension, communication, prediction and the understanding of tradeoffs.</li> <li>1.3 Recognise and analyse criteria and specifications appropriate to specific problems, and plan strategies for their solution.</li> <li>1.4 Analyse the extent to which a computer-based system meets the criteria defined for its current use and future development.</li> <li>1.5 Deploy appropriate theory, practices and tools for the specification, design, implementation and evaluation of computer-based systems.</li> <li>1.6 Present succinctly to a range of audiences (orally, electronically or in writing) rational and reasoned arguments that address a given information handling problem or opportunity, including the assessment of the impact of new technologies.</li> <li>1.7 Recognise the professional, moral and ethical issues involved in the exploitation of computer technology and be guided by the adoption of appropriate professional, ethical and legal practices.</li> <li>1.8 Demonstrate knowledge and understanding of the use of scientific principles in the creation, use and support of computer-based systems, in particular, e-Finance systems.</li> <li>1.9 Demonstrate knowledge and understanding of mathematical principles necessary to underpin their programme of study and the apply to apply mathematical methods, tools and notations proficiently in the analysis and solution to computing problems.</li> <li>1.10 Demonstrate knowledge and understanding of the main current technical language and practices of accounting.</li> <li>1.11 Demonstrate knowledge and understanding of contemporary theories and empirical evidence concerning accounting in at least one of its contexts.</li> <li>1.12 Appreciate the nature of the contexts in which finance can be seen as operating, including knowledge of the institutional framework necessary for understanding the role, operation and function of markets and financial institutions.</li> <li>1.13 Demonstrate knowledge of the major theoretical tools and theories of finance, and their relevance and application to theoretical and practical problems.</li> <li>1.14 Understand the factors influencing the investment behaviour and opportunities of private individuals.</li> <li>1.15 Understand financial service activity in the economy, and an appreciation of how finance theory and evidence can be employed to interpret these services.</li> </ol>
	<p><b>Practical Abilities</b></p>
	<p>To provide students with the ability to</p> <ol style="list-style-type: none"> <li>2.1 Specify, design and construct computer-based software systems, in particular, in the context of their chosen specialisation.</li> <li>2.2 Critically evaluate and analyse traditional and e-Finance related computer-based systems in terms of general quality attributes, possible trade-offs presented within a given problem, risks or safety aspects that may be involved in their operation, and professional, ethical and legal issues</li> <li>2.3 Deploy effectively the tools used for the construction and documentation of computer applications, with particular emphasis on understanding the whole process involved in the effective deployment of computers to solve practical problems.</li> <li>2.4 Work as a member of a development team, recognising the different roles within a team and different ways of organising teams.</li> <li>2.5 Operate computing equipment effectively, taking into account its logical and</li> </ol>

	<p>physical properties.</p> <p>2.6 Acquire the knowledge necessary for the design and development of computer-based systems in general and e-Finance systems in particular.</p> <p>2.7 Investigate and define a problem, identify constraints, understand customer and user needs, identify and manage cost drivers, ensure fitness for purpose and manage the design process and evaluate outcomes.</p> <p>2.8 Interpret financial data including that arising in the context of the firm or household from accounting statements and data generated in financial markets.</p>
27a.	<b>Mapping of subject-based Learning Outcomes:</b>

Module	Subject-Based Learning Outcomes (Cognitive Abilities)								
	1.1	1.2	1.3	1.4	1.5	1.6	1.7	1.8	1.9
ACFI101 (•)									
ACFI102 (•)									
ACFI103 (•)									
ECON121 (•)									
COMP101 (•)	C	C	C	C	C	C		C	
COMP102 (•)	E, C	E, C			E, C	C	E	E, C	
COMP106 (•)	E, C	E, C	E, C		E, C	C		E, C	
COMP109 (•)	E, C				E, C	C			E, C
ACFI201 (•)									
ACFI202									
ACFI204 (•)			E						
ECON241 (•)			E						E
MKIB225			E, C						
COMP201 (•)	E, C	E, C	E, C	E, C	E, C	C		E, C	
COMP207 (•)	E, C	E, C	E, C	E, C	E, C	C		E, C	
COMP215 (•)	C	C	C	C	C	C	C	C	
COMP226 (•)	E, C	E, C	E, C	E, C	E, C	E, C		E, C	E, C
COMP283	C	C	C	C	C				
COMP284	C	C	C	C	C				
COMP285	C	C	C	C	C				
ACFI301			E			E			
ACFI302						C			
ACFI304 (•)			E, C			E, C			
ACFI341 (•)			E, C			E, C			
EBUS301	C	C	C		C				C
MKIB351									
COMP310	E	E	E	E	E	E		E	E
COMP315 (•)	E	E	E	E	E	E		E	E
COMP323 (•)	E, C	E, C				E, C		E, C	E, C
COMP325	E, C	E, C				E, C		E, C	E, C
COMP396 (+)	C	C	C	C	C	C	C	C	
	1.10	1.11	1.12	1.13	1.14	1.15			
ACFI101 (•)	E	E							
ACFI102 (•)	E	E							
ACFI103 (•)	E	E	E	E	E	E			
ECON121 (•)									
COMP101 (•)									
COMP102 (•)									

COMP106 (•)									
COMP109 (•)									
ACFI201 (•)	E, C	E, C							
ACFI202	E, C	E, C							
ACFI204 (•)	E, C	E, C	E, C	E, C	E, C	E, C			
ECON241 (•)			E	E	E	E			
MKIB225									
COMP201 (•)									
COMP207 (•)									
COMP215 (•)	C	C	C	C		C			
COMP226 (•)				E, C					
COMP283									
COMP284									
COMP285									
ACFI301	E	E							
ACFI302	E, C	E, C							
ACFI304 (•)			E, C	E, C	E, C	E, C			
ACFI341 (•)			E, C	E, C	E, C	E, C			
EBUS301				C					
MKIB351	C			C					
COMP310									
COMP315 (•)									
COMP323 (•)									
COMP325									
COMP396 (+)			C	C	C	C			
E --- Exam; C --- Continuous Assessment (`•' indicates a required module, `+' indicates a mandatory module)									
Module	Subject-Based Learning Outcomes (Practical Abilities)								
	2.1	2.2	2.3	2.4	2.5	2.6	2.7	2.8	
ACFI101 (•)						E		E	
ACFI102 (•)								E	
ACFI103 (•)						E		E	
ECON121 (•)									
COMP101 (•)	C	C	C		C	C	C		
COMP102 (•)	C	C	C		C		C		
COMP106 (•)	C	C	C		C		C		
COMP109 (•)									
ACFI201 (•)								E, C	
ACFI202								E, C	
ACFI204 (•)						C			
ECON241 (•)								E	
MKIB225									
COMP201 (•)	C	C	C		C	C	C		
COMP207 (•)	C	C	C		C	C	C		
COMP215 (•)	C	C	C	C	C		C		
COMP226 (•)									
COMP283	C	C	C		C	C	C		
COMP284	C	C	C		C	C	C		

COMP285	C	C	C		C		C		
ACFI301						E, C		E	
ACFI302						E, C		E, C	
ACFI304 (•)						E, C		E, C	
ACFI341 (•)							E, C	E, C	
EBUS301		C				C			
MKIB351								C	
COMP310									
COMP315 (•)									
COMP323 (•)	C	C	C		C		E, C		
COMP325	C	C	C		C	C	E, C		
COMP396 (+)	C	C	C	C	C		C		
E --- Exam; C --- Continuous Assessment (• indicates a required module, '+' indicates a mandatory module)									

28.	<p><b>Skills and other attributes</b></p> <p>The key skills outlined below fall within the QAA Subject Benchmark for Computing, the QAA Subject Benchmark for Accounting, the draft QAA Subject Benchmark for Finance, and British Computer Society Accreditation Criteria.</p> <p>Key Skills (Transferable Skills)</p> <p>To provide students with:</p> <p>3.1 effective information-retrieval skills (including the use of browsers, search engines and catalogues).</p> <p>3.2 numeracy in both understanding and presenting cases involving a quantitative dimension.</p> <p>3.3 the ability to effectively use general IT facilities.</p> <p>3.4 the ability to manage their own learning and development including time management and organisational skills.</p> <p>3.5 an appreciation of the need for continuing professional development in recognition of the need for lifelong learning.</p> <p>3.6 a capacity for the critical evaluation of arguments and evidence.</p> <p>3.7 an ability to analyse and draw reasoned conclusions concerning structured and, to a more limited extent, unstructured problems from a given set of data and from data which must be acquired by the student.</p> <p>3.8 experience of working in groups, and other interpersonal skills, and in presenting the results of their work orally as well as in written form.</p>
28a.	<b>Mapping of skills and other attributes:</b>

Module	Key Skills (Transferable Skills)								
	3.1	3.2	3.3	3.4	3.5	3.6	3.7	3.8	
ACFI101 (•)		E		E					
ACFI102 (•)		E		E			E		
ACFI103 (•)		E		E					
ECON121 (•)				E, C			E, C		
COMP101 (•)	C		C	C	C				
COMP102 (•)	C	C	C	E, C					
COMP106 (•)	C		C	E, C				C	
COMP109 (•)		C		E, C					
ACFI201 (•)		E, C	C	E, C		E, C	E, C		
ACFI202		E	E, C	E, C		E, C	E, C		
ACFI204 (•)		E, C	C	E, C		E, C	E, C		
ECON241 (•)		E, C				E	E		
MKIB225	C		C	C		E, C	E, C	C	

Module	Key Skills (Transferable Skills)								
	3.1	3.2	3.3	3.4	3.5	3.6	3.7	3.8	
COMP201 (•)	C	C	C	E, C	C				
COMP207 (•)	C	C	C	E, C	C				
COMP215 (•)	C		C	E, C	C			C	
COMP226 (•)	C	E, C	C	E, C	C				
COMP283	C		C	C					
COMP284	C		C	C					
COMP285	C		C	C					
ACFI301		E				E	E		
ACFI302		E, C				E, C	E, C		
ACFI304 (•)		E, C				E	E, C		
ACFI341 (•)		E, C				E	E, C		
EBUS301			C		C				
MKIB351		C	C			E, C	C	C	
COMP310		E		E		E	E		
COMP315 (•)		E		E	E	E			
COMP323 (•)	C		C	E, C		E			
COMP325	C		C	E, C		E			
COMP396 (+)	C	C	C	C	C	C	C	C	

E --- Exam; C --- Continuous Assessment  
(`•' indicates a required module, `+' indicates a mandatory module)

29.	<p><b>Career Opportunities:</b></p> <p>The programme is directed at all career opportunities within the general domain of information management and information systems and, in particular, e-Finance. These include technical and managerial positions in the IT development and service industry, in particular, those that provide software and services to the financial services industry. Also included are specialist positions in the financial services industry involving the development, deployment or maintenance of e-Finance software. In addition, the programme will provide a sound basis for further studies at Master and PhD level in Information Management and Information Systems, Computer Science, e-Finance, Finance, and Accounting.</p>
-----	---

### PART C: ENTRANCE REQUIREMENTS

**30. Academic Requirements:**

The typical offer for entrance to this degree programme is three subjects at A2 level with grades ABB or better, and an AS level in Mathematics at Grade B or better.. Other qualifications are welcomed, including BTEC, Scottish Certificate of Education and the Irish Leaving Certificate. GCSE English language and GCSE Mathematics (or equivalent), both at grade C or better, are also required.

Overseas qualifications are considered using NARIC to verify O/S qualifications and standards. Candidates from non-English speaking countries are expected to have IELTS  $\geq$  6.5. Advice is sought with regard to other English Language qualifications.

**31. Work Experience:**

It is University Policy to encourage mature entry. Each case is considered on merit, but in such cases work experience is taken into account.

**32. Other Requirements:**

None

## PART D: PROGRAMME STRUCTURE

### 33. Programme Structure:

Students are expected to pursue the following programme of study  
(`•' indicates a required module, `+' indicates a mandatory module)

<b>Year 1:</b>		<i>Credit Value</i>	<i>Level</i>	<i>Semester</i>	<i>Exam: CW</i>
ACFI101	Introduction to Financial Accounting (•)	15	1	1	100:0
COMP101	Introduction to Programming in Java (•)	15	1	1	0:100
COMP109	Foundations of Computer Science (•)	15	1	1	80:20
ECON121	Principles of Microeconomics	15	1	1	80:20
COMP102	Introduction to Databases (•)	15	1	1+2	60:40
COMP106	Human-Centric Computing (•)	15	1	2	80:20
ACFI102	Introduction to Management Accounting (•)	15	1	2	100:0
ACFI103	Introduction to Finance (•)	15	1	2	100:0

  

<b>Year 2:</b>		<i>Credit Value</i>	<i>Level</i>	<i>Semester</i>	<i>Exam: CW</i>
ACFI201	Financial Reporting	15	2	1	75:25
ACFI204	Financial Management	15	2	1	70:30
COMP201	Software Engineering I (•)	15	2	1	80:20
COMP207	Database Development (•)	15	2	1	80:20
COMP215	eCommerce Group Project (•)	15	2	2	0:100
COMP226	Computer-Based Trading in Financial Markets (•)	15	2	2	80:20
ECON241	Securities Market (•)	15	2	2	100:0
<i>Plus options totalling 15 credits from the following five modules provided pre-requisites are satisfied:</i>					
ACFI202	Accounting Theory	15	2	2	70:30
MKIB225	International Business	15	2	2	50:50
COMP283	Applied Database Management	7.5	2	2	0:100
COMP284	Scripting Languages	7.5	2	2	0:100
COMP285	Computer Aided Software Development	7.5	2	2	0:100

  

<b>Year 3:</b>		<i>Credit Value</i>	<i>Level</i>	<i>Semester</i>	<i>Exam: CW</i>
COMP396	Honours Year Automated Trading Project (+)	30	3	1+2	0:100
ACFI304	Business Finance (•)	15	3	1	
COMP323	Introduction to Computational Game Theory (•)	15	3	1	80:20
<i>Plus options totalling 15 credits from the following four modules provided pre-requisites are satisfied:</i>					
ACFI301	Theory and Practice of Auditing	15	3	1	100:0
COMP325	Algorithmic and Game Theoretic Foundations for Internet. Economics	15	3	1	80:20
EBUS301	e-Business Models and Strategy	15	3	1	0:100
MKIB351	Global Strategic Management	15	3	1	60:40
ACFI341	Finance and Markets (•)	15	3	2	100:0
COMP315	Technologies for E-Commerce (•)	15	3	2	100:0
<i>Plus options totalling 15 credits from the following two modules provided pre-requisites are satisfied</i>					
ACFI302	Corporate Reporting and Analysis	15	3	2	75:25
COMP310	Multi-Agent Systems	15	3	2	100:0

**Note 1:** in exceptional circumstances, and with the approval of the programme Director of Studies, alternative modules may be substituted for non-mandatory modules.

The following table shows the interdependencies between modules on this programme:

Module code	Module title	Level	Semester	Credits	Pre-requisite	Parent dept / school
ACFI101(●)	Introduction to Financial Accounting	1	1	15	none	ULMS
COMP101(●)	Introduction to Programming in Java	1	1	15	none	CS
COMP109(●)	Foundations of Computer Science	1	1	15	none	CS
ECON121(●)	Principles of Microeconomics	1	1	15	none	ULMS
COMP102 (●)	Introduction to Databases	1	1+2	15	COMP101	CS
COMP106 (●)	Human-centric Computing	1	2	15	COMP101	CS
ACFI102 (●)	Introduction to Management Accounting	1	2	15	ECON111	ULMS
ACFI103 (●)	Introduction to Finance	1	2	15	none	ULMS
ACFI201 (●)	Financial Reporting	2	1	15	ACFI101 or ACFI104	ULMS
ACFI204 (●)	Financial Management	2	1	15	ACFI102, ECON111	ULMS
COMP201 (●)	Software Engineering	2	1	15	COMP101, COMP102	CS
COMP207 (●)	Database Development and Design	2	1	15	COMP101, COMP102	CS
COMP215 (●)	e-Commerce Group Project	2	2	15	none	CS
COMP226 (●)	Computer-Based Trading in Financial Markets	2	2	15	none	CS
ECON241 (●)	Securities Markets	2	2	15	ECON111	ULMS
ACFI202	Accounting Theory	2	2	15	ACFI201	ULMS
MKIB225	International Business	2	2	15	none	ULMS
COMP283	Advanced Database Management	2	2	7.5	COMP102, COMP207	CS
COMP284	Scripting Languages	2	2	7.5	COMP101, COMP201	CS
COMP285	Computer Aided Software Development	2	2	7.5	COMP101, COMP201	CS
ACFI304 (●)	Business Finance	3	1	15	ACFI204	ULMS
COMP323 (●)	Introduction to Computational Game Theory	3	1	15	COMP109	CS
ACFI301	Theory and Practice of Auditing	3	1	15	ACFI101 or ACFI104, ACFI201 recomm	ULMS
COMP325	Algorithmic and Game Theoretic Foundations of Internet Economics	3	1	15	COMP101, COMP109	CS
EBUS301	e-Business Models and Strategy	3	1	15	none	ULMS
ACFI341 (●)	Finance and Markets	3	2	15	ACFI304	ULMS
COMP315 (●)	Technologies for e-Commerce	3	2	15	COMP207	CS
ACFI302	Corporate Reporting and Analysis	3	2	15	ACFI201	ULMS
COMP310	Multi-Agent Systems	3	2	15	none	CS
COMP396 (+)	Honours Year Automated Trading Project	3	1+2	30	COMP226	CS

**Note 1:** A-level Mathematics, or equivalent, is a sufficient replacement for ECON111 as a prerequisite for various modules.

**Note 2:** COMP396 and COMP226 are new modules in 2011-12. In 2011-12, students on COMP396 will not have had the opportunity to take COMP226 in the previous year of study. Additional lectures will be given as part of COMP396 in order to replace the COMP226 prerequisite.

**34. Industrial Placement / Work Placement / Year Abroad:**

None.

**35. Liaison Between the Level 2 Schools Involved:**

The programme will be overseen by a management group consisting initially of Prof Paul Goldberg (CS), Dr. David Jackson (director of studies) (CS), Dr. Frank Steffen (ULMS) and Dr. Gary Cook (ULMS).

ULMS to have representation on the Board of Studies in Computer Science via invitation to the head of ULMS to send a representative. SSLC representation as described below.

**PART E: LEARNING, TEACHING AND ASSESSMENT STRATEGIES**

**36. Learning, Teaching and Assessment Strategies:**

The programme complies with:

- a. University of Liverpool Policy on Standards and Quality in Learning and Teaching
- b. University of Liverpool Learning and Study Skills Strategy
- c. University of Liverpool Code of Practice on Assessment  
(all at [http://www.liv.ac.uk/tqsd/pol\\_strat\\_cop/index.htm](http://www.liv.ac.uk/tqsd/pol_strat_cop/index.htm))
- d. Department of Computer Science Learning and Teaching Strategy:  
<http://www.csc.liv.ac.uk/department/LTAS.html>

The programme is delivered through a mixture of formal lectures, tutorials, guided reading, private study, and supervised and unsupervised practical work, which includes computer practicals as well as projects:

- Lectures, academic tutorials, problem classes and seminars taking place during weekly one- or two-hour time-table slots in lecture theatres/teaching rooms. Lectures are designed to provide students with information, principles and examples; they will also guide students towards further reading where required. Tutorials and problem classes will be conducted in small to mid size groups of students to discuss problems relating to modules with academic tutors
- Computing practicals taking place during weekly one-hour time-table slots in computer laboratories. Students work individually, in pairs or in groups, typically under supervision of academic tutors.
- Second Year Group Project. Students working groups of four to six students under the guidance of a member of staff. Lectures will introduce students to the conduct and stages of the group project, aspects of working in groups, and provide guidance on the reports that the groups need to produce and how the work will be assessed.
- Honours Year Automated Trading Project: Students working in teams of five under the guidance of a supervisor. Lectures and practicals will be introduce students to the tools and techniques relevant for their projects.

The programme is assessed by a combination of traditional written examinations and continuous assessment, including marked essays and computer programming problems. The second year group project and the final year solo project modules include an element of assessment by oral, poster and demonstration representation of project work. All modules are assessed during and/or at the end of the semester at which they are taught.

Modules in the Computer Science programme are assessed as follows (according to the nature of the module):

- i. Examination only where the assessment is based entirely on examination, which is held at the end of the semester in which the module is taught.
- ii. Continuous Assessment.
- iii. Examination and continuous assessment.

Details of the assessment method for each module can be obtained from the Department of Computer Science Student Handbook.

Note: If desired, students enrolled on the BSc Electronic Commerce Computing programme can transfer (at the discretion of the appropriate director of undergraduate studies) to the BSc Electronic Commerce Computing with a Year in Industry programme at any time during the first year of study. Similarly, students enrolled on the BSc Electronic Commerce Computing programme can transfer (at the discretion of the appropriate director of undergraduate studies) to the BSc Computer Information Systems programme at any time during the first two years of study.

### 37. **Assessment Information for Students:**

#### 37a. **Assessment of Modules**

Full details of assessment methods for each module can be obtained from the module specification and module description on the Departmental web pages.

Full details of assessment procedures, including penalties governing late submission, rules relating to plagiarism and collusion, and mechanisms for consideration of assessments affected by ill-health or other extenuating circumstances can be found in Chapter 5 of the Department of Computer Science Student handbook.

Students are advised of the importance of, and their responsibility for, keeping their Personal Tutor and the Department informed of any factors affecting their progress (e.g. medical, financial or personal), especially during examination periods.

#### 37b. **Marking descriptors**

Marking on level 1, 2, and 3 modules offered by the Department of Computer Science is carried out using the following marking descriptors:

90 – 100%:

##### **For practical exercises and projects:**

Displays an *exceptional* degree of originality and creativity and / or *exceptional* analytical and problem solving skills. Solution must have novel aspects. The methodology employed is well-developed and correct.

##### **For exercises, presentations, projects, and written examinations:**

Shows *critical* understanding of current knowledge. For level 3 this should include relevant recent research papers. Perceptive, focused treatment of all issues/questions presented in a critical and scholarly way.

80-89%

##### **For practical exercises and projects:**

Displays a level of originality and creativity and / or the ability to suggest realistic solutions to novel problems. The methodology employed is well-developed and correct.

##### **For exercises, presentations, projects, and written examinations:**

Evidence of wide reading. For level 3 this should include relevant research papers and books. Perceptive, focused treatment of all issues/questions presented in a critical and scholarly way.

70-79%

**For practical exercises and projects:**

Demonstrates ability to analyse, interpret and organise information to produce coherent accounts or solve complex problems. All aspects of a suitable methodology evident and used correctly.

**For exercises, presentations, projects, and written examinations:**

Comprehensive knowledge and understanding of the subject together with the ability to put the work into context and to critically evaluate selected aspects of the work. Arguments/answers will be clear, competently structured, and accurate.

60-69%

**For practical exercises and projects:**

Demonstrates ability to analyse, interpret and organise information to produce coherent accounts or solve relatively complex problems. Use of a suitable methodology evident and used correctly, with minor omissions.

**For exercises, presentations, projects, and written examinations:**

Good knowledge and understanding of the subject, with no major gaps or omissions, but minor gaps or omissions may occur. Arguments/answers will be clear, competently structured, and largely accurate.

50-59%

**For practical exercises and projects:**

Displays ability to analyse, interpret and organise information to produce coherent accounts or solve well-defined problems of some scope. Most aspects of a suitable methodology evident and used correctly, some omissions occur but without negative impact on the result of the work.

**For exercises, presentations, projects, and written examinations:**

Satisfactory knowledge and understanding of the essentials of the subject, with an ability to integrate information into a clear, well-structured account, but lacking in breadth or depth, or with some significant aspects omitted. Arguments/answers must be clear, although they may not be well-developed or reflect a wider appreciation of the subject. Some errors and omissions are likely to be present.

40-49%

**For practical exercises and projects:**

Demonstrates an ability to solve limited, well-defined, problems of a familiar type. Most aspects of a suitable methodology evident, but minor flaws in its use or omissions with some negative impact on the result of the work.

**For exercises, presentations, projects, and written examinations:**

General knowledge and understanding of the subject but very limited in depth or breadth. Arguments/answers are likely to be somewhat lacking in structure. There are likely to be errors and omissions and the evidence provided to support arguments will be very limited.

35-39%

**For practical exercises and projects:**

Fails to demonstrate an ability to solve limited, well-defined, problems of a familiar type. Aspects of a suitable methodology evident, but flaws in its use or omissions which negatively impact on the result of the work.

**For exercises, presentations, projects, and written examinations:**

Knowledge and understanding of the subject are fragmentary, some aspects showing a very basic level of understanding but other aspects displaying fundamental errors. Arguments/answers are lacking in structure. There are errors and omissions and the evidence provided to support arguments is very limited.

30-34%

**For practical exercises and projects:**

Fails to demonstrate an ability to solve simple, well-defined, problems of a familiar type. Lack of the use of a suitable methodology or flaws in its use which negatively impact on the result of the work.

**For exercises, presentations, projects, and written examinations:**

Knowledge and understanding of the subject are fragmentary, with an insufficient number of aspects showing a very basic level of understanding and too many aspects displaying fundamental errors and omissions. Arguments/answers are lacking in structure. There are errors and omissions and the evidence provided to support arguments is very limited.

20-29%

**For practical exercises and projects:**

Fails to demonstrate an ability to solve simple, well-defined, problems of a familiar type under guidance. Serious lack of the use of a suitable methodology or flaws in its use which negatively impact on the result of the work.

**For exercises, presentations, projects, and written examinations:**

Very limited range of knowledge with many important gaps and omissions. Shows incomplete understanding with numerous errors of interpretation. Arguments/answers have little structure, contain serious errors, and there is no support for arguments.

10-19%

**For practical exercises and projects:**

Little evidence of the use of a suitable methodology.

**For exercises, presentations, projects, and written examinations:**

Shows only the most limited and fragmentary knowledge of the subject with little or no understanding of essential principles and concepts. Work is likely to be unstructured and ill-presented. Arguments/answers are only loosely related to issues/questions or only cover a seriously inadequate part of the issues/questions

0-9%

**For practical exercises and projects:**

No evidence of the use of a suitable methodology.

**For exercises, presentations, projects, and written examinations:**

Virtually devoid of any evidence of knowledge or understanding of the subject. No or almost no arguments/answers.

Marking on level 1, 2, and 3 modules offered by the University of Liverpool Management School is carried out using the following marking descriptors

1. ASSIGNMENTS

90 – 100%	Thorough and authoritative execution of the brief. Containing evidence of significant independent research, reflective, perceptive, well-structured, showing significant originality in ideas or argument, aptly focussed and very well written, few areas for improvement.
80-89%	Thorough execution of the brief, well-structured, clearly argued, signs of originality and/or independent critical analytical ability. Supported by independent research, materials well utilized; well focussed and well written.
70-79%	Good execution of the brief; well-focussed, knowledgeable, strong evidence of reading beyond the basic texts and displays mastery of the subject matter.
60%-69%	Well-structured and well-focussed answer with strong evidence of reading beyond the basic texts. Thorough and comprehensive in approach. Displays a good knowledge of the subject matter and an ability to discuss theories and concepts.

50-59%	Competently structured answer, reasonably well-focussed and comprehensive but tending to be descriptive in approach. Limited evidence of reading beyond the basic texts.
40%-49%	Relies largely upon lecture materials and basic texts. Descriptive in approach, limited knowledge and understanding of the subject matter displayed; partial and/or containing significant errors and/or irrelevancies; poorly structured.
30%-39%	Inadequate execution of the brief. Highly partial and/or containing serious errors; contents partly or substantially irrelevant. Poorly structured. Displays little knowledge of the subject matter.
0% - 29%	Seriously inadequate execution of the brief. Failure to focus upon the question. Seriously short or even devoid of theoretical under-pinning. Large sections irrelevant. Evidence of potential plagiarism.

## 2. EXAMINATIONS

90 – 100%	Comprehensive and authoritative answer. Containing evidence of significant independent research. Reflective, perceptive, well-structured. Showing significant originality in ideas or argument. Aptly focussed and well-written. Few areas for improvement.
80-89%	Well-focussed, carefully structured and thorough answer. Cogent and clearly argued, showing signs of originality and/or independent critical analytical ability. Supported by independent research. Displays mastery of the subject matter to an exceptional degree.
70-79%	Well-focussed answer, cogent, comprehensive, strong evidence of reading beyond the basic texts, displays mastery of the subject matter and ability to discuss theories and concepts in an intelligent and penetrating manner.
60%-69%	Comprehensive and coherent answer, suitably focussed. Evidence of significant reading beyond the basic texts. Displays a good knowledge of the subject matter and an ability to discuss theories and concepts intelligently and analytically.
50-59%	Competently structured answer. Reasonably well-focussed and comprehensive but tending to be descriptive in approach. Limited evidence of reading beyond the basic texts.
40%-49%	Relies largely upon lecture materials and basic texts. Descriptive in approach, displays limited knowledge and understanding of the subject matter. Partial and/or containing significant errors and/or irrelevancies. Poorly structured.
30%-39%	Inadequate reference to relevant concepts and theories. Highly partial and/or containing serious errors. Contents partly or substantially irrelevant. Poorly structured. Displays little knowledge or understanding of the subject matter.
0% - 29%	Seriously inadequate reference to relevant concepts and theories. Near complete or complete failure to focus upon the question. Highly partial and/or containing many serious errors. Large sections irrelevant. Question not answered or questions not attempted.

## 3. DISSERTATIONS

*Not applicable*

## 4. GROUP OR INDIVIDUAL PRESENTATIONS

90 – 100%	Engaging presentation involving good use of visual aids, clear introduction, delivery and summary. Materials well organised. Time limits observed. Questions responded to with courtesy and authority. Contents well-focussed upon the brief. Evidence of research beyond basic texts and lecture materials and the ability to use materials in a creative and original manner. Little scope for improvement.
80-89%	Engaging presentation involving good use of visual aids, clear introduction, delivery and summary. Materials well organised. Time limits observed. Questions responded to with courtesy and authority. Contents well-focussed

	upon the brief. Evidence of research beyond basic texts and lecture materials and the ability to use materials in a creative and original manner. Scope for minor improvement on one or more points.
70-79%	Generally engaging presentation involving good use of visual aids, clear introduction, delivery and summary. Materials well organised. Time limits observed. Questions responded to with courtesy and authority. Contents generally appropriate and well-focussed upon the brief. Evidence of research beyond basic texts and lecture materials.
60%-69%	Generally satisfactory presentations involving clear introduction, delivery and summary and possibly supported by visual aids. Good focus upon the brief. Materials well-organised, time limits observed, questions responded to with courtesy. Contents generally appropriate, satisfactory focus upon the brief. Evidence of research beyond basic texts and lecture materials.
50-59%	Generally satisfactory presentation but slippage on one or more of the following points: introduction; delivery of main presentation and summary; appropriateness of visual aids; general organisation of presentation including observance of time limits and dealing with questions. Presentation based mainly on basic texts and lecture materials.
40%-49%	Barely satisfactory presentation involving weaknesses on one or more of the following points: introduction; delivery of main presentation and summary; appropriateness of visual aids; general organisation of presentation including observance of time limits and dealing with questions. Presentation based mainly on basic texts and lecture materials. May be partial and contain errors.
30%-39%	Unsatisfactory presentation involving weaknesses on one or more of the following points: delivery of main presentation and summary; use and appropriateness of visual aids; general organisation of presentation including observance of time limits an dealing with questions. Presentation based mainly on basic texts and lecture materials. May be partial and contain errors.
0% - 29%	Highly unsatisfactory presentation possibly involving complete failure to focus upon the brief. Alternatively, may involve serious and multiple weaknesses as regards introduction, delivery of main presentation and summary, use and appropriateness of visual aids and general organisation of presentation including observance of time limits and dealing with questions. Presentation based mainly upon lecture materials. May be partial and contain errors.

## 5. UNDERGRADUATE PORTFOLIOS, LEARNING LOGS AND JOURNALS

90 – 100%	Comprehensive and highly detailed records. Carefully structured, extensive evidence of critical and creative reflection upon almost every aspect of course content. Hard to identify gaps or suggestions for improvement. Excellent standard of presentation.
80 – 89%	Comprehensive and detailed, systematically structured, significant evidence of critical and creative reflection upon course content. Few gaps or suggestions for improvement. Excellent standard of presentation.
70 – 79%	Comprehensive and detailed, systematically structured, significant evidence of creative and critical reflection upon course content. Few gaps or suggestions for improvement. Excellent standard of presentation. Possibly some weaknesses but compensated for by a high level of achievement upon other criteria.
60 – 69%	Comprehensive and detailed, systematically structured. Evidence of sustained reflection upon course content. Excellent standard of presentation.
50 – 59%	Systematically structured and reasonably comprehensive and detailed though there may be evidence of work missing or otherwise not sustained. Good standard of presentation but tending to be descriptive/anecdotal rather than reflective.
40 – 49%	Adequately structured and reasonably comprehensive but lacking in detail. Adequate standard of presentation but predominantly descriptive/anecdotal rather than reflective.
30 – 39%	Structuring barely adequate. Contents partial and level of detail patchy.

	Presentation barely adequate may contain irrelevant material. Little attempt made to engage in reflection.
20 – 29%	A very 'thin' presentation, that is., inclusion of inadequate material, virtually no attempt made whatsoever to reflect upon materials. Presentation inadequate, for example, lacking proper diary, little use made of sign-posting or other aids to reading.
0 – 19%	A very 'thin' presentation, that is, inclusion of materials seriously inadequate, virtually no attempt made whatsoever to reflect upon materials and in any case, hardly any materials to reflect upon. Presentation inadequate, for example, lacking proper diary, little use made of sign-posting or other aids to reading. May contain irrelevant material.

### 37c. **Pass marks**

The pass mark for each module for students on this programme is 40%.

### 37d. **Progression**

The criteria for completing each year of study, other than the final year, and for progression to the next year/level of study, require a student to:

- i. pass all mandatory modules; and
- ii. pass in modules amounting to 90 credits; and
- iii. achieve at least 40% averaged across all modules and a minimum mark of 35% in all modules.

These criteria are compulsory for study years 1 and 2 and for levels 1 and 2.

Marks in the range 35-39% which are compensated for by higher marks in other modules will be recorded as 40%.

**Note:** If desired, students enrolled on the BSc Electronic Commerce Computing programme can transfer (at the discretion of the appropriate director of undergraduate studies) to the BSc Electronic Commerce Computing with a Year in Industry programme or any other compatible and admissible programme with a Year in Industry at any time during the first year of study. Similarly, students enrolled on the BSc Electronic Commerce Computing programme can transfer (at the discretion of the appropriate director of undergraduate studies) to any other compatible and admissible programme without a Year in Industry at any time during the first year of study.

### 37e. **Re-sits**

The actual marks achieved following a re-sit examination will be recorded, but such marks will be recorded as having been achieved at the second attempt. Where the mark achieved at the second attempt falls between 35-39% and meets the criteria for compensation, the mark will be recorded as 40% and will be flagged as having been achieved at the second attempt.

For the purposes of determining progression from years one to two and years two to three, the actual marks achieved following re-sits will be used to calculate the average mark.

For the purposes of arriving at the average mark for degree classification, marks achieved following re-sits in year two and year three will be capped at 40%.

Rules relating to the re-sitting of assessments can be found in the Departmental Student Handbook and module information pages from the Department's web pages.

### 37f. **Final degree classification for students who have commenced Year 1 before September 2010**

The degree classification will be determined according to the University-wide formula for non-clinical undergraduate degrees. The system is based on the use of an overall average of the weighted marks for year two and year three as the first indicator of the degree classification, with a system of profiling being employed in cases of students whose averages are at the borderline between classifications.

**37f(i). Credit to be passed**

If modules totalling 315 credits or more have been passed, i.e. the module has been awarded a mark of 40% or above (this includes compensated marks of 40% gained in years one and two) and all mandatory modules have been passed, the candidate will be **considered** for the award of a classified honours degree. If modules totalling **more than** 45 credits in year three have been failed, i.e. the module has been awarded a mark of less than 40%, the candidate will **not** be eligible for the award of an honours degree but may be eligible for the award of a pass (non-honours) degree.

**37f(ii). Averaging and Initial indication of degree classification**

The average marks for year two and year three are calculated and an overall average arrived at, *weighted 30:70 between year two and year three*. The overall average for years two and three is rounded to the nearest whole number (decimal places up to four are rounded down, decimal places of five or more are rounded up). The initial indication of degree classification is then reached as follows:

70%+	1 <sup>st</sup>
60-69%	2.1
50-59%	2.2
40-49%	3 <sup>rd</sup>
Less than 40%	Pass degree

**37f(iii). Profiling**

- (i) If a candidate achieves 67-69%, 57-59%, 47-49% or 37-39% by averaging, i.e. missing automatic classification by no more than 3%, they will have their mark profile considered.
- (ii) If a candidate is profiled, s/he will be awarded the higher class if **either** 120 credits of study in years two and three are in a higher class than the overall average mark and of these at least 60 credits have been achieved in year three **or** 135 credits across years two and three are in a higher class than the overall average mark.

**37f(iv). Failure of Modules**

If a candidate meets the criteria set out above for the award of a classified honours degree but has failed a module or modules in their final year, the Board of Examiners, before recommending the award of a classified honours degree, must satisfy itself that the overall learning outcomes of the programme of study have been achieved. If, for example, without mitigating circumstances, a student has a mark of zero in a module due to non-attendance or failure to take the assessments, the Board of Examiners would be unlikely to recommend the award of an honours degree.

**37g. Pass (Non-Honours) degrees for students who have commenced Year 1 before September 2010**

Candidates who do not meet the criteria for a classified honours degree will be eligible for the award of a pass (non-honours) degree if they achieve the pass mark (40%) in modules totalling a minimum of 300 credits (irrespective of their overall average). This therefore includes:

- candidates who are not considered for a classified honours degree because they have not achieved the minimum 315 credits requirement;
- candidates who have achieved the minimum 315 credits requirement for an honours degree but whose average mark is less than 40% and who are *either* not eligible for profiling *or* are not eligible for a classified honours degree following profiling; and
- candidates with a failed module or modules in year three who have *prima facie* met the criteria for the award of a classified honours degree but to whom the Board of Examiners have declined to award a classified honours degree on the basis that they have failed to achieve the overall learning outcomes of the programme.

**37h. Final year re-sit examinations/assessments for students who have commenced Year 1 before September 2010**

Candidates who fail modules, on the following basis, may retake final year examinations/assessments at the next ordinary sitting of the examinations/assessments for those modules:

- Candidates who achieve the minimum 315 credits threshold for the award of a classified honours degree but whose average mark/module profile does not entitle them to a classified honours degree;
- candidates who achieve 300 credits but fewer than 315 credits and are only therefore eligible for the award of a pass degree; and
- candidates who have failed a module or modules in year three and have *prima facie* met the criteria for the award of a classified honours degree but to whom the Board of Examiners have declined to award a classified honours degree on the basis that they have failed to achieve the overall learning outcomes of the programme.

Such candidates will be able to opt **either** to accept a pass degree **or** to retake the examinations/assessments for the failed modules. The marks for the modules in which examinations/assessments have been retaken will be capped at 40% for the purpose of calculating the average for the degree classification.

- Candidates who do not achieve enough credits for either an honours degree or a pass degree will be allowed to re-sit and, depending upon the results of the examinations/assessments which are retaken, may be eligible for the award of either a classified honours degree or a pass degree. The marks for the modules in which examinations/assessments have been retaken will be capped at 40% for the purpose of calculating the average for the degree classification.

Normally candidates will repeat the failed modules without attendance, unless the Board of Examiners determines that there are special circumstances which suggest that they should be allowed to repeat with attendance.

Candidates may opt not to repeat **all** their failed final year modules but rather to repeat the requisite number which, if passed at an appropriate level, would result in the award of a degree. However, they would be well advised to repeat all failed final year modules, in view of the fact that re-sit marks are capped at 40% and also that no further opportunity for retaking examinations/assessments would be available.

In circumstances where there have been significant changes to a module or a module is not offered in every year, special examinations/assessments must be set for candidates retaking the module.

Candidates who fail up to 45 credits in the final year but who still achieve an average which results in a classified honours degree will not be allowed to retake modules to gain a higher classification.

**37i. Final degree classification for students who have commenced Year 1 from September 2010**

The degree classification will be determined according to the University-wide formula for non-clinical undergraduate degrees. The system is based on the use of an overall average of the weighted marks for year two and year three as the first indicator of the degree classification, with a system of profiling being employed in cases of students whose averages are at the borderline between classifications.

**37i(i). Credit to be passed**

If modules totalling 330 credits or more have been passed, i.e. the module has been awarded a mark of 40% or above (this includes compensated marks of 40% gained in years one and two) and all mandatory modules have been passed, the candidate will be **considered** for the award of a classified honours degree. If modules totalling **more than** 30 credits in year three have been failed, i.e. the module has been awarded a mark of less than 40%, the candidate

will **not** be eligible for the award of an honours degree but may be eligible for the award of a pass (non-honours) degree.

**37i(ii). Averaging and Initial indication of degree classification**

The average marks for year two and year three are calculated and an overall average arrived at, *weighted 30:70 between year two and year three*. The overall average for years two and three is rounded to the nearest whole number (decimal places up to four are rounded down, decimal places of five or more are rounded up). The initial indication of degree classification is then reached as follows:

70%+	1 <sup>st</sup>
60-69%	2.1
50-59%	2.2
40-49%	3 <sup>rd</sup>
Less than 40%	Pass degree

**37i(iii). Profiling**

(iii) If a candidate achieves 69%, 59%, 49% or 39% by averaging, i.e. missing automatic classification by no more than 1%, they will have their mark profile considered.

(iv) If a candidate is profiled, s/he will be awarded the higher class if **either**

- 120 credits of study over years 2 and 3 were in the higher class and of these at least 30 must have been achieved in year 3, **or**;
- at least 60 credits of study in the final year were in the higher class.

**37i(iv). Failure of Modules**

If a candidate meets the criteria set out above for the award of a classified honours degree but has failed a module or modules in their final year, the Board of Examiners, before recommending the award of a classified honours degree, must satisfy itself that the overall learning outcomes of the programme of study have been achieved *and* that the student had made a reasonable attempt at the assessment. If, for example, without mitigating circumstances, a student has a mark of zero in a module due to non-attendance or failure to take the assessments, the Board of Examiners would be unlikely to recommend the award of an honours degree.

**37j. Pass (Non-Honours) degrees for students who have commenced Year 1 from September 2010**

Candidates who do not meet the criteria for a classified honours degree will be eligible for the award of a pass (non-honours) degree if they achieve the pass mark (40%) in modules totalling a minimum of 300 credits (irrespective of their overall average). This therefore includes:

- candidates who are not considered for a classified honours degree because they have not achieved the minimum 330 credits requirement;
- candidates who have achieved the minimum 330 credits requirement for an honours degree but whose average mark is less than 40% and who are *either* not eligible for profiling *or* are not eligible for a classified honours degree following profiling; and
- candidates with a failed module or modules in year three who have *prima facie* met the criteria for the award of a classified honours degree but to whom the Board of Examiners have declined to award a classified honours degree on the basis that they have failed to achieve the overall learning outcomes of the programme *or* had not made a reasonable attempt at the assessment.

**37k. Final year re-sit examinations/assessments for students who have commenced Year 1 from September 2010**

Candidates who fail modules, on the following basis, may retake final year examinations/assessments at the next ordinary sitting of the examinations/assessments for those modules:

- Candidates who achieve the minimum 330 credits threshold for the award of a classified honours degree but whose average mark/module profile does not entitle them to a classified honours degree;
- candidates who achieve 300 credits but fewer than 330 credits and are only therefore eligible for the award of a pass degree; and
- candidates who have failed a module or modules in year three and have *prima facie* met the criteria for the award of a classified honours degree but to whom the Board of Examiners have declined to award a classified honours degree on the basis that they have failed to achieve the overall learning outcomes of the programme.

Such candidates will be able to opt **either** to accept a pass degree **or** to retake the examinations/assessments for the failed modules. The marks for the modules in which examinations/assessments have been retaken will be capped at 40% for the purpose of calculating the average for the degree classification.

- Candidates who do not achieve enough credits for either an honours degree or a pass degree will be allowed to re-sit and, depending upon the results of the examinations/assessments which are retaken, may be eligible for the award of either a classified honours degree or a pass degree. The marks for the modules in which examinations/assessments have been retaken will be capped at 40% for the purpose of calculating the average for the degree classification.

Normally candidates will repeat the failed modules without attendance, unless the Board of Examiners determines that there are special circumstances which suggest that they should be allowed to repeat with attendance.

Candidates may opt not to repeat **all** their failed final year modules but rather to repeat the requisite number which, if passed at an appropriate level, would result in the award of a degree. However, they would be well advised to repeat all final year failed modules, in view of the fact that re-sit marks are capped at 40% and also that no further opportunity for retaking examinations/assessments would be available.

In circumstances where there have been significant changes to a module or a module is not offered in every year, special examinations/assessments must be set for candidates retaking the module.

Candidates who fail up to 30 credits in the final year but who still achieve an average which results in a classified honours degree will not be allowed to retake modules to gain a higher classification.

### 37l. **Award of alternative exit qualifications**

If a student fails to meet the criteria for the award of a classified honours degree or a pass degree, or is unable to complete his or her degree programme, he or she may be awarded one of the following qualifications:

- Certificate in Higher Education – this will be awarded provided that the student has achieved a minimum of 120 credits at a level equivalent to the first year of an honours degree programme.
- Diploma in Higher Education – this will be awarded provided that the student has achieved a minimum of 240 credits, at least 120 of which must be at a level equivalent to the second year of an honours degree programme.

Students who withdraw from The University of Liverpool will be awarded either of the above qualifications provided that they meet the necessary criteria.

### 37m. **The Board of Examiners and the External Examiner**

The Department of Computer Science operates the following three Boards of Examiners for its on-campus undergraduate provision:

1. The Computer Science Undergraduate Module Review Board of Examiners
2. The Computer Science Undergraduate Progress Board of Examiners
3. The Computer Science Undergraduate Final Board of Examiners

These three Boards of Examiners are also referred to as Computer Science Undergraduate Boards of Examiners.

The Computer Science Undergraduate Module Board of Examiners consists of (a) the Chair of the Computer Science Undergraduate Boards of Examiners, (b) the External Examiner(s) responsible for undergraduate modules and undergraduate and integrated Master's programmes, (c) the Secretary of the Computer Science Undergraduate Boards of Examiners (an academic member of staff), (d) the Assessment Officer of the Department, (e) the Examinations Officer of the Department, (f) the Directors of Studies of undergraduate and integrated Master's programmes for which the Department is responsible, and (g) the module co-ordinators of undergraduate modules for which the Department is responsible.

The Computer Science Undergraduate Progress Board of Examiners consists of (a) the Chair of the Computer Science Undergraduate Boards of Examiners, (b) the External Examiner(s) responsible for undergraduate modules and undergraduate and integrated Master's programmes, (c) the Secretary of the Computer Science Undergraduate Boards of Examiners (an academic member of staff), (d) the Chair of the Computer Science Undergraduate Appeals and Progress Panel, (e) the Assessment Officer of the Department, (f) the Examinations Officer of the Department, (g) the Directors of Studies of undergraduate and integrated Master's programmes for which the Department is responsible, and (h) the module co-ordinators of level 0, 1, and 2 modules for which the Department is responsible.

The Computer Science Undergraduate Final Board of Examiners consists of (a) the Chair of the Computer Science Undergraduate Boards of Examiners, (b) the External Examiner(s) responsible for undergraduate modules and undergraduate and integrated Master's programmes, (c) the Secretary of the Computer Science Undergraduate Boards of Examiners (an academic member of staff), (d) the Chair of the Computer Science Undergraduate Appeals and Progress Panel, (e) the Assessment Officer of the Department, (f) the Examinations Officer of the Department, (g) the Directors of Studies of undergraduate and integrated Master's programmes for which the Department is responsible, (h) the module co-ordinators of level 3 modules for which the Department is responsible, and (i) the academic supervisors of Honours Year and MEng projects in the Department of Computer Science.

For the terms of reference of each of these Boards of Examiners see <http://www.csc.liv.ac.uk/departament/admin/boe.html>.

## **PART F: STUDENT REPRESENTATION AND FEEDBACK**

### **38. Student Representation and Feedback:**

Student representation and feedback are facilitated through:

1. The University Personal tutoring scheme.
2. The Department's Staff-Student Liaison Committee (which operates in accordance with the University's code of practice on student representation).
3. Module questionnaires completed by students at the end of each taught module.
4. Programme questionnaires completed by students at the end of each year of study.

Full details can be found in the Department of Computer Science Student Handbook.

The Department's Undergraduate Staff-Student Liaison Committee and its Postgraduate Staff-Student Liaison Committee currently hold joint meetings whenever possible in order to facilitate a consolidated consideration of issues related to level 3 and level M modules taken by students on undergraduate, integrated Master's, and postgraduate taught programmes. In addition, the consideration of undergraduate issues benefits from the insights provided by postgraduate students while the consideration of postgraduate issues provides undergraduate students with an outlook on postgraduate study in the department.

**PART G: STATUS OF PROFESSIONAL, STATUTORY OR REGULATORY BODY  
ACCREDITATION**

**39. Status of Professional, Statutory or Regulatory Body Accreditation**

The programme is accredited to 2013 by the British Computer Society (BCS) as fully meeting the educational requirement for CIP registration and partially meeting the educational requirement for CEng registration. After its visit in October 2009, the BCS accreditation panel came to the conclusion that it 'was satisfied that the aims, content and underpinning of the programmes fell sufficiently within the Computing Benchmark' and recommended the above accreditation for a period of five intakes.

**PART H: DIVERSITY & EQUALITY OF OPPORTUNITY AND WIDENING PARTICIPATION**

**40. Diversity & Equality of Opportunity and Widening Participation**

The programme design, structure and content are consistent and compliant with the University's Diversity and Equality of Opportunity Policy.

## ANNEX 1

This Annex 1 is to be used to record all modifications made to the programme.

**Please indicate in the table below any changes or revisions that have been made to the programme, to be completed each time an amendment is made to an existing programme:**

<b>Description of modification</b> (Please also include details of any student consultation undertaken or student consent to the change that was required.)	<b>Minor or major modification</b>	<b>Date approved by FAQSC</b>	<b>Date approved by UAQSC (if applicable)</b>
<p><b>Aug 11: Changes for 2010-11:</b></p> <ul style="list-style-type: none"> <li>• Learning outcomes relating to Practical Abilities were reordered and two of the learning outcomes were combined into one. (This was done to bring the numbering of outcomes into line with other programmes and does not constitute a change to the programme learning outcomes.)</li> <li>• Addition of modules: COMP104 (required/optional), COMP118 (required), COMP280 (optional), COMP281 (optional), COMP282 (optional), COMP282 (optional), COMP283 (optional), COMP284 (optional), COMP285 (optional), COMP324 (optional), COMP325 (optional).</li> <li>• Removal of modules: COMP112, COMP114, COMP204 (replaced by COMP104).</li> </ul> <p>The Computer Science Staff-Student Liaison Committee was presented with draft versions of the new programme structures for all undergraduate programmes and a number of issues relating to the introduction of new modules in years 1 to 3 and the withdrawal of some year 1 modules have been discussed. The intended changes to the curriculum were also presented to our Industrial Liaison Committee at a meeting in January 2011. The proposals, in particular, the introduction of 'Technical Skills' modules (COMP280-284), were positively received.</p>	<b>Minor</b>		
<p><b>Nov 11: Amendment to entry requirements</b></p>	<b>Minor</b>		