



## **Programme Specification**

# **MEng (Hons) Computer Science**

**November 2011**

**PART A: PROGRAMME SUMMARY INFORMATION**

1.	<b>Title of Programme:</b>	Computer Science		
2.	<b>Programme Code:</b>	G401		
3.	<b>Award:</b>	MEng (Hons) Computer Science <b>480 credits including at least 90 credits at level M (FHEQ level 7)</b>	<b>Credit 480</b>	<b>Level 7</b>
4.	<b>Other entry awards (if applicable):</b>	N/A	<b>Credit</b>	<b>Level</b>
5.	<b>Exit Awards:</b>	BSc (Hons) Computer Science <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>
		Diploma in Higher Education <b>240 credits including at least 90 credits at level 2 (FHEQ level 5) or higher</b>	<b>240</b>	<b>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>	2005		
7.	<b>Frequency of intake:</b>	Annually, in September/October		
8.	<b>Duration and mode of study:</b>	Full-time, 4 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 from UoL:</b>	None
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 Anthony Hunter (University College London)
20.	<b>Professional, Statutory or Regulatory Body:</b>	BCS, The Chartered Institute of IT
21.	<b>QAA Subject Benchmark Statement(s)</b>	Computing
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>	

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

26.	<p><b>Aims of the Programme:</b></p> <p>The MEng programme aims to develop graduates who will be expected to be competent in the fundamentals of Computer Science and to have specialised in a number of current areas of research interest within the academic discipline of Computer Science. In addition the programme aims to produce graduates with wider transferable skills (than those that would be obtained on a BSc Computer Science programme) who are able to meet the needs of a wide spectrum of employers within the IT industry.</p> <p>The programme builds on the Computer Science Department's well established BSc in Computer Science (G400). At the start of the programme students will be provided with a good "all-round" understanding of the academic discipline of Computer Science. As the programme progresses students will be afforded the opportunity to specialise in particular areas such as: programming languages, software development, AI, algorithmics, etc; culminating in the final (fourth) year of study with a much deeper and systematic specialisation in a number of selected topics at the forefront of current research. In addition, in the fourth year of study, the students will be provided with a comprehensive understanding of how established techniques of research and enquiry are used to extend, create and interpret knowledge in Computer Science and how that knowledge may be applied. The programme will consequently enable students to participate in current research and will also facilitate an understanding of (research) project management and control.</p>
27.	<p><b>Subject-based Learning Outcomes</b></p> <p>Cognitive Abilities</p>

	<p>To provide student with</p> <p>1.1 A deep and critical understanding of the essential facts, concepts, principles and theories relating to computer science.</p> <p>1.2 A good knowledge of how 1.1 can be used to model and design computer-based systems.</p> <p>1.3 A good understanding of how to recognise and critically analyse criteria and specifications appropriate to problems to be solved by computer, and plan innovative strategies for their solution.</p> <p>1.4 A sound knowledge of the criteria and mechanisms whereby computer-based systems can be critically evaluated and analysed to determine the extent to which they meet the criteria defined for their current and future development.</p> <p>1.5 An in depth understanding of the appropriate theory, practices, languages and tools that may be deployed for the specification, design, implementation and evaluation of computer-based systems.</p> <p>1.6 Knowledge of how to present succinctly (orally, electronically or in writing) rational and reasoned arguments that address a given problem to be solved by computer.</p> <p>1.7 A good understanding of the professional, moral and ethical issues involved in the exploitation of computer technology, and the associated professional, ethical and legal practices.</p> <p>1.8 An awareness of current problems and research issues in selected areas of computer science.</p> <p>1.9 An awareness of current advanced scholarship and research in selected areas of computer science and how this might be applied.</p> <p>1.10 An awareness of how established techniques of research and enquiry are used to extend, create and interpret knowledge in computer science.</p>
	<p><b>Practical Abilities</b></p> <p>To provide students with the ability to</p> <p>2.1 Specify, design and construct computer-based systems in a manner that is both innovative and creative.</p> <p>2.2 Critically evaluate and analyse 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.</p> <p>2.3 Deploy effectively the tools used for the construction and documentation of computer-based systems, with practical emphasis on understanding the whole process involved in the effective deployment of computers to solve practical problems.</p> <p>2.4 Work as a member of a development team, recognising the different roles within a team and different ways of organising teams.</p> <p>2.5 Operate computing equipment effectively, taking into account its logical and physical properties.</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	1.10
COMP101 (●)	C	C	C	C	C	C				
COMP102 (●)	E, C	E, C	E, C	E, C	E, C	E, C	E, C			
COMP103 (●)	E, C	E, C				E, C				
COMP104 (●)	E, C	E, C	E, C	E, C	E, C					
COMP106 (●)	E, C	E, C	E, C	E, C	E, C	E, C				
COMP108 (●)	E, C	E, C	E, C	E, C	E, C			E, C		
COMP109 (●)	E, C				E, C					
COMP110 (●)	C		C			C	C			
COMP118 (●)	E, C									
COMP201 (●)	E, C	E, C	E, C	E, C	E, C	E, C				
COMP202 (●)	E, C	E, C	E, C	E, C	E, C			E, C		
COMP207 (●)	E, C	E, C	E, C	E, C	E, C		E, C			
COMP208 (●)	C	C	C	C	C	C	C	C		

COMP213 (●)	E, C	E, C		E, C	E, C	E, C				
COMP218 (●)	E, C	E, C	E, C	E, C	E, C			C		
COMP219 (●)	E, C	E, C	E, C	E, C	E, C					
COMP280	C	C	C	C	C		C			
COMP281	C	C	C	C	C					
COMP282	C	C	C	C	C					
COMP283	C	C	C	C	C					
COMP284	C	C	C	C	C					
COMP285	C	C	C	C	C					
COMP304	E, C									
COMP305	E, C	E, C	E, C	E, C	E, C					
COMP309 (●)	E, C	E, C	E, C	E, C	E, C			E, C		
COMP310	E	E	E	E	E					
COMP313	E	E	E	E	E					
COMP315	E	E	E	E	E		E			
COMP317 (●)	E, C	E, C		E, C	E, C			E, C		
COMP319	E	E	E	E	E					
COMP321	E, C	E, C								
COMP323	E, C	E, C				E, C		E, C		
COMP324	E, C	E, C								
COMP327	E, C	E, C	E, C	E, C	E, C	E, C				
COMP329	C	C	C	C	C	C				
COMP390 (+)	C	C	C	C	C	C	C	C		
COMP516 (●)	C	C	C	C	C	C	C	C	C	C
COMP521	E, C							E, C	E, C	C
COMP522	E, C	E, C	E, C		E, C	E, C	E, C	E, C	E, C	
COMP523	E, C	E, C	E, C		E, C			E, C	E, C	
COMP524	E, C	E, C	E, C		E, C	E, C		E, C	E, C	
COMP525	E, C	E, C		E, C	E, C			E, C	E, C	
COMP526	E, C	E, C	E, C		E, C			E, C	E, C	
COMP527	E, C				E, C	E, C		E, C	E, C	
COMP528	E, C		E, C		E, C	E, C		E, C	E, C	
COMP591 (+)	C	C	C	C	C	C	C	C	C	C
COMP592 (+)	C	C	C	C	C	C	C	C	C	C
Modules	Subject-Based Learning Outcomes (Practical Abilities)									
	2.1	2.2	2.3	2.4	2.5					
COMP101 (●)	C	C	C		C					
COMP102 (●)	C	C	C		C					
COMP103 (●)	C	C	C		C					
COMP104 (●)	C	C	C		C					
COMP106 (●)	C	C	C		C					
COMP108 (●)	C	C			C					
COMP109 (●)										
COMP110 (●)		C	C		C					
COMP118 (●)	C									
COMP201 (●)	C	C	C		C					
COMP202 (●)	C	C			C					
COMP207 (●)	C	C	C		C					
COMP208 (●)	C	C	C	C	C					
COMP213 (●)	C	C	C		C					
COMP218 (●)	C	C			C					
COMP219 (●)	C	C	C		C					
COMP280	C	C	C		C					
COMP281	C	C	C		C					
COMP282	C	C	C		C					
COMP283	C	C	C		C					

COMP284	C	C	C		C					
COMP285	C	C	C		C					
COMP304	C	C	C							
COMP305	C	C	C		C					
COMP309 (•)	C	C			C					
COMP310	E	E								
COMP313	E	E								
COMP315	E	E								
COMP317 (•)	C	C	C		C					
COMP319	E	E								
COMP321	C	C	C		C					
COMP323	C	C	C		C					
COMP324	C	C	C		C					
COMP327	C	C	C		C					
COMP329	C	C	C	C	C					
COMP390 (+)	C	C	C		C					
COMP516 (•)	C	C	C		C					
COMP521	C	C	C		C					
COMP522	C	C	C		C					
COMP523	C	C	C		C					
COMP524	C	C	C		C					
COMP525	C	C	C		C					
COMP526	C	C	C		C					
COMP527	C	C	C		C					
COMP528	C	C	C		C					
COMP591 (+)	C	C	C	C	C					
COMP592 (+)	C	C	C		C					

28.	<b>Skills and other attributes</b>
	<p><b>Key Skills (Transferable Skills)</b></p> <p>To provide students with:</p> <p>3.1 Effective information retrieval skills (including use of the WWW and the evaluation of information retrieved from such sources).</p> <p>3.2 A good foundation in basic numeracy.</p> <p>3.3 The ability to use general IT facilities effectively.</p> <p>3.4 The ability to manage their own learning and development, and time management and organisational skills.</p> <p>3.5 The ability to deal with issues at the forefront of the academic discipline of Computer Science in a manner based on sound judgements.</p> <p>3.6 The ability to participate within the professional, legal and ethical framework within which they would be expected to operate as professionals within the IT industry.</p> <p>3.7 An appreciation of the need for continuing professional development in recognition for the need for continuing professional development as “a self-directed life-long learner” across the discipline of Computer Science.</p>
28a.	<b>Mapping of skills and other attributes:</b>

Modules	Key Skills (Transferable Skills)										
	3.1	3.2	3.3	3.4	3.5	3.6	3.7				
COMP101 (•)	C		C	C			C				
COMP102 (•)	C	C	C	E, C		E					
COMP103 (•)	C		C	E, C							
COMP104 (•)	C		C	E, C							
COMP106 (•)	C		C	E, C							
COMP108 (•)		E, C		E, C							
COMP109 (•)		E, C		E, C							
COMP110 (•)	C		C	C		C	C				

COMP118 (•)		E, C		E, C						
COMP201 (•)	C		C	E, C			C			
COMP202 (•)	C	E, C		E, C						
COMP207 (•)	C	E, C	C	E, C		C	C			
COMP208 (•)	C		C	C			C			
COMP213 (•)	C		C	E, C			C			
COMP218 (•)		C		E, C						
COMP219 (•)		C	C	E, C						
COMP280										
COMP281	C		C	C						
COMP282	C		C	C						
COMP283	C		C	C						
COMP284	C		C	C						
COMP285	C		C	C						
COMP304				E, C	E, C					
COMP305	C	C	C	E, C	E, C					
COMP309 (•)		C		E, C	E, C					
COMP310		E		E	E					
COMP313				E	E		E			
COMP315		E		E	E		E			
COMP317 (•)	C	C	C	E, C	E, C					
COMP319				E	E, C					
COMP321	C		C	E, C	E, C					
COMP323	C		C	E, C	E, C					
COMP324	C		C	E, C	E, C					
COMP327	C	C	C	E, C	E, C		C			
COMP329	C	C	C	E, C	E, C		C			
COMP390 (+)	C		C	C		C	C			
COMP516 (•)	C		C	C	C	C	C			
COMP521	C		C	E, C	E, C		C			
COMP522	C		C	E, C	E, C		C			
COMP523	C	C	C	E, C	E, C		C			
COMP524	C		C	E, C	E, C		C			
COMP525	C		C	E, C	E, C		C			
COMP526	C	C	C	E, C	E, C		C			
COMP527	C	C	C	E, C	E, C		C			
COMP528	C		C	E, C	E, C		C			
COMP591 (+)	C		C	C	C	C	C			
COMP592 (+)	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> The MEng Computer Science programme is directed at all career opportunities within the general domain of computer science. In particular the expectation is that the skills they will obtain and exercise on the programme, will provide a basis for their further career development towards senior technical and managerial positions in the IT industry, and towards specialisation in the field of Computer Science related research and development.</p>
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### PART C: ENTRANCE REQUIREMENTS

30. **Academic Requirements:**

The typical offer for entrance to degree programmes in the Department of Computer Science is three subjects at GCE A level with grades AAB or better, and an AS level in Mathematics at

Grade B or better. We give a one grade bonus (ABB) for the inclusion of one or more mathematical subjects (Mathematics, Further Mathematics, Pure Mathematics, Computing/Computer Science, and Physics) included in these three subjects. All students are also expected to have GCSE English Language at grade C or better.

A wide range of other UK and International qualifications are also accepted.

Overseas qualifications are considered using NARIC to verify O/S qualifications and standards. Candidates from non-English speaking countries are expected to have IELTS  $\geq$  6.0 with minimum 5.5 in each component (other English Language Tests are also accepted, see <http://www.liv.ac.uk/study/international/countries/english-language.htm#ug> for details).

### 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)

Year 1:		Credit Value	Level	Semester	Exam: CW
COMP101	Introduction to Programming in Java (•)	15	1	1	0:100
COMP103	Computer Systems (•)	15	1	1	80:20
COMP109	Foundations of Computer Science (•)	15	1	1	80:20
COMP110	Professional Skills in Computer Science (+)	7.5	1	1+2	0:100
COMP102	Introduction to Databases (•)	15	1	1+2	60:40
COMP104	Operating System Concepts (•)	15	1	2	80:20
COMP106	Human-Centric Computing (•)	15	1	2	80:20
COMP108	Algorithmic Foundations (•)	15	1	2	80:20
COMP118	Logic in Computer Science (•)	7.5	1	2	80:20
Year 2:		Credit Value	Level	Semester	Exam: CW
COMP201	Software Engineering I (•)	15	2	1	80:20
COMP207	Database Development (•)	15	2	1	80:20
COMP213	Advanced Object Oriented Programming (•)	15	2	1	50:50
COMP219	Artificial Intelligence (•)	15	2	1	80:20
COMP202	Complexity of Algorithms (•)	15	2	2	80:20
COMP218	Decision, Computation and Language (•)	15	2	2	80:20
COMP208	Group Software Project (•)	15	2	2	0:100
<i>Plus options totalling 15 credits from the following seven modules provided pre-requisites are satisfied</i>					
COMP280	Work Based Learning for Science	7.5	2	2	0:100
COMP281	Principles of C and Memory Management	7.5	2	2	0:100
COMP282	Advanced Object Oriented C Languages	7.5	2	2	0:100
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
COMP104	Operating System Concepts ( <i>only in 2011-12</i> )	15	1	2	80:20

<b>Year 3:</b>		Credit Value	Level	Semester	Exam: CW
COMP390	Honours Year Computer Science Project (+)	30	3	1+2	0:100
COMP309	Efficient Sequential Algorithms (●)	15	3	1	80:20
<i>Plus options totalling 30 credits from the following seven modules provided pre-requisites are satisfied</i>					
COMP304	Knowledge Representation and Reasoning	15	3	1	80:20
COMP305	Biocomputation	15	3	1	80:20
COMP319	Software Engineering II	15	3	1	100:0
COMP321	Ontology Languages and their Applications	15	3	1	80:20
COMP323	Introduction to Computational Game Theory	15	3	1	80:20
COMP327	Mobile Computing	15	3	1	60:40
COMP329	Robotics and Autonomous Systems	15	3	1	0:100
COMP317	Semantics of Programming Languages (●)	15	3	2	80:20
<i>Plus options totalling 30 credits from the following four modules provided pre-requisites are satisfied</i>					
COMP310	Multi-Agent Systems	15	3	2	100:0
COMP313	Formal Methods	15	3	2	100:0
COMP315	Technologies for E-Commerce	15	3	2	100:0
COMP324	Complex Social Networks	15	3	2	80:20

  

<b>Year 4:</b>		Credit Value	Level	Semester	Exam: CW
COMP591	MEng Group Project (+)	30	M	1	0:100
COMP516	Research Methods in Computer Science (●)	15	M	1	0:100
<i>Plus options totalling 15 credits from the following three modules provided pre-requisites are satisfied</i>					
COMP521	Knowledge Representation	15	M	1	75:25
COMP522	Privacy and Security	15	M	1	75:25
COMP523	Advanced Algorithmic Techniques	15	M	1	75:25
COMP592	MEng Individual Project (+)	30	M	2	0:100
<i>Plus options totalling 30 credits from the following five modules provided pre-requisites are satisfied</i>					
COMP524	Safety and Dependability	15	M	2	75:25
COMP525	Reasoning about Action and Change	15	M	2	75:25
COMP526	Applied Algorithmics	15	M	2	75:25
COMP527	Data Mining	15	M	2	75:25
COMP528	Multi-Core Programming	15	M	2	75:25

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

**Note 2:** COMP104 is a new year 1 module introduced in 2011-12, replacing the year 2 module COMP204 Computer Systems and Their Implementation. Offering COMP104 as year 2 optional module in 2011-12 will ensure that year 2 students still have the opportunity to take a module similar to COMP204. From 2012-13 onwards, all year 1 students will have taken COMP104 thereby ensuring that this module no longer needs to be offered as year 2 option.

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

The optional module COMP280 Work Based Learning for Science will offer students the opportunity to experience the 'world of work' on a placement organised by the CLL (Centre for Lifelong Learning) and to develop a range of employability skills, including teamwork, project management, and commercial awareness.

With respect to COMP390 (the Honours Year Computer Science Project), this may be either an 'in house' or a 'Work Based Learning' (WBL) project. In the case of the latter the students carry out their projects in consultation with companies / organisations. Such projects are administered jointly by the CLL (Centre for Lifelong Learning) and the Department of Computer Science. Similar assessment procedures apply to both in-house and WBL final year projects.

With respect to COMP591 (the final year MEng Group Project) and COMP592 (the final year MEng Individual Project) students may elect to undertake projects either suggested by or in

cooperation with local industrial partners, or other organisations, provided that such projects feature all the requirements expected of a level M module. To this end contact with industry is facilitated by The University's Business Bridge, the CS department's industrial liaison committee and personnel contact on behalf of CS department staff and/or individual students. The appropriateness of industry related projects will be judged on a case-by-case basis. Such projects will be managed and supervised in the same manner as "internal" projects, i.e. they are not placements.

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

N/A

**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/departement/LTAS.html>

The programme is delivered through a mixture of formal lectures, guided reading and tutorial groups supported by practical work. 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 third and final year solo project modules include an element of assessment by oral, poster and demonstration representation of project work. All modules are assessed at the end of the semester at which they are taught. The mark produced for a module is subject to scrutiny at the meetings of Departmental Examiners, by the External Examiner and also by Faculty Examiners meetings. Decisions on progress are also controlled by the university's published regulations.

Modules in the Computer Science MEng 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.

With respect to the final year of the MEng programme the broad aim of the Department in its teaching is to focus on depth of study, and critical awareness and evaluation, in selected areas of current research and advanced scholarship within the academic discipline of Computer Science; while at the same time ensuring a more general all round ability. In addressing these aims, the fourth year of study focuses on particular specialist areas of research within the academic discipline of Computer Science.

**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 M modules offered by the Department of Computer Science is carried out using the following marking descriptors:

Grade	Description	Key features
<b>Outstanding</b> <b>80%+</b>	<b>Outstanding work.</b> Factually almost faultless; clearly directed; logical; comprehensive coverage of topic; strong evidence of reading/research outside the material presented in the programme; substantial elements of originality and independent thought; very well written.	<b>Distinction Grade:</b> Originality; Well-directed independent thought
<b>Excellent</b> <b>70%-79%</b>	<b>Excellent work.</b> Logical; enlightening; originality of thought or approach; good coverage of topic; clear, in-depth understanding of material; good evidence of outside reading/research; very well written and directed.	
<b>Very Good</b> <b>60%-69%</b>	<b>Very Good work.</b> Logical; thorough; factually sound (no serious errors); good understanding of material; evidence of outside reading/research; exercise of critical judgement; some originality of thought or approach; well written and directed.	<b>Pass Grade:</b> Essentially correct and complete: Competence; Critical judgement
<b>Good</b> <b>50%-59%</b>	<b>Good work.</b> Worthy effort, but undistinguished outcome. Essentially correct, but possibly missing important points. Largely derived from material delivered in the programme, but with some evidence of outside reading/research; some evidence of critical judgement; some weaknesses in expression or presentation.	
<b>Marginal Fail</b> <b>40%-49%</b>	<b>Inadequate work.</b> Incomplete coverage of topic; evidence of poor understanding of material; Poor presentation; lack of coherent argument.	<b>Compensatable Fail:</b> Significant weaknesses, but serious effort
<b>Fail</b> <b>0%-39%</b>	<b>Unsatisfactory work:</b> Serious omissions; significant errors/ misconceptions; poorly directed at targets; evidence of inadequate effort.	<b>Fail:</b> Little or no achievement of learning outcomes

**37c. Pass marks**

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

**37d. Progression**

The criteria for progression depend on the year of study and are stated below.

**Note:** If desired, students enrolled on the MEng Computer Science programme can transfer (at the discretion of the appropriate director of undergraduate studies) to either the BSc

Computer Science or any other compatible and admissible programme at any time during the first two years of study.

Furthermore, if a student opts to exit at the end of year 3, the candidate must inform the University of their request to be considered for a Bachelors degree, prior to the beginning of the following academic session.

**37d(i). Progression from Year 1 to Year 2**

The criteria for progression from Year 1 to Year 2 require a student to:

- i. pass all mandatory modules; and
- ii. pass in modules amounting to 90 credits; and
- iii. obtain an overall average of at least 40% in modules totalling 120 credits and a minimum mark of 35% in all modules.

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

**37d(ii). Progression from Year 2 to Year 3**

The criteria for progression from Year 2 to Year 3 require a student to:

- i. pass all mandatory modules; and
- ii. pass in modules amounting to 90 credits; and
- iii. obtain an overall average of at least 55%, at the first attempt, in modules totalling 120 credits and a minimum mark of 35% in all modules.

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

Students that fail to meet the MEng Computer Science progression requirements at the end of year 2 (in the absence of mitigating circumstances) are required to transfer to either the BSc Computer Science or the BSc in Computer Information Systems programme.

**37d(iii). Progression from Year 3 to Year 4**

The criteria for progression from Year 3 to Year 4 require a student to:

- i. pass all mandatory modules (the pass mark for each module is 40%); and
- ii. pass in modules amounting to 90 credits (out of a total of 120 credits available); and
- iii. obtain an overall average of at least 55%, at the first attempt, in modules totalling 120 credits.

Students who fail to meet the MEng progression requirements at the end of Year 3 will be considered for the award of a BSc (Hons) degree in Computer Science (see Section 37h below).

**37e. Re-sits**

Re-sit arrangements depend on the year of study.

**37e(i). Re-sits for failed year 1 or year 2 modules**

Students who do not meet the above requirements for progression from year 1 to year 2 or from year 2 to year 3 (see Section 37d(ii)) are normally permitted to re-sit the examinations in their failed modules in September. Students who fail a year of study, having failed modules re-sat in September, may be permitted to repeat their failed modules with or without attendance in the following academic year.

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 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 purpose of determining progression from years 1 to 2 and years 2 to 3, the actual marks achieved following re-sits will be used to calculate the average mark.

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

#### 37e(ii). **Re-sits for failed year 3 modules**

Candidates who do not meet the above requirements for progression from year 3 to year 4 (see Section 37d(iii)) or have opted to exit at the end of year 3, and **do not** qualify for a classified BSc degree at the end of year 3 shall have the opportunity to re-sit at the next ordinary sitting.

Candidates who do not meet the above requirements for progression from year 3 to year 4 (see Section 37d(iii)) or have opted to exit at the end of year 3, and who **do** qualify for a classified BSc degree will not be allowed to retake modules to gain a higher 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 year 3 modules but rather to repeat the requisite number which, if passed at an appropriate level, would result in the award of a BSc degree. However, they would be well advised to repeat all failed year 3 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.

Candidates who do meet the above progression requirement for year 3 (see Section 37d(iii)), but have failed modules in year 3, will be given the opportunity to re-sit failed year 3 modules once, during, but not beyond, year 4, at the next ordinary sitting. Candidates who carry failed credits into year 4 should be advised about the number of additional credits that they may fail in year 4 in order to be eligible for a MEng degree.

#### 37e(iii). **Re-sits for failed year 4 modules**

Candidates with insufficient credits for a MEng degree at the end of Year 4 shall have the opportunity to re-sit failed year 4 modules at the next ordinary sitting. The mark obtained at the second attempt will be capped at the pass mark for the purposes of determining the final degree, except where the second attempt is allowed under mitigating circumstances.

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

#### 37f. **BSc Degree Classification for students failing to achieve a classified MEng degree who have commenced Year 1 before September 2010**

The degree classification for students failing to meet the year 3 to year 4 progression requirements (see Section 37d(iii)) or failing to obtain a classified MEng degree at the end of year 4 (see Section 37k), will be determined according to the University-wide system for three year 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. Marks achieved in year 4 are normally disregarded.

#### 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 1 and 2) 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 3 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 (see Section 37h(iv) below).

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

The average marks for year 2 and year 3 are calculated and an overall average arrived at, weighted 30:70 between year 2 and year 3. The overall average for year 2 and year 3 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). **Pass (Non-Honours) degrees**

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; and
- Candidates who have achieved the minimum 315 credits requirement for an honours degree but whose average mark is less than 40% and who are not eligible for either: (i) profiling, or (ii) a classified honours degree following profiling.

Students who have progressed to year 4 will normally have already met the criteria for a classified BSc Honours degree.

**Note:** Successful re-examination will **not permit students to proceed to the fourth year of study**, of the MEng programme, it will however allow successful candidates to be considered by the Board of Examiners for a BSc in Computer Science.

### 37g. **BSc Degree Classification for students failing to achieve a classified MEng degree who have commenced Year 1 from September 2010**

The degree classification for students failing to meet the year 3 to year 4 progression requirements (see Section 37d(iii)) or failing to obtain a classified MEng degree at the end of year 4 (see Section 37k), will be determined according to the University-wide system for three year 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. Marks achieved in year 4 are normally disregarded.

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

To be eligible for the award of a classified Bachelor's degree, students must have passed modules totalling 330 credits or more i.e. the modules have been awarded a mark of 40% or above (including compensated marks of 40% gained in Years 1 and 2) and must have passed all mandatory modules. The credits passed must be at the appropriate level as detailed in

Appendix A to the Code of Practice on Assessment. If students have failed modules worth **more than** 30 credits in Year 3, i.e. the modules have been awarded a mark of less than 40%, they will not be eligible for the award of a Classified Bachelor's honours degree, but may be eligible for the award of a pass (non honours) degree (see Section 37h(iv) below).

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

The average marks for year 2 and year 3 are calculated and an overall average arrived at, weighted 30:70 between year 2 and year 3. The overall average for year 2 and year 3 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

#### 37g(iii). **Profiling**

- (i) 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.
- (ii) 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.

#### 37g(iv). **Pass (Non-Honours) degrees**

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

- (i) students who are not considered for a classified honours degree because they have not achieved the minimum 330 credits requirement;
- (ii) students 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
- (iii) students 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 has declined to award a classified honours degree on the basis that they have failed to achieve the overall learning outcomes of the programme or the Board is not satisfied that the student made a reasonable attempt at the failed assessments.

Students who have progressed to year 4 will normally have already met the criteria for a classified BSc Honours degree.

**Note:** Successful re-examination will **not permit students to proceed to the fourth year of study**, of the MEng programme, it will however allow successful candidates to be considered by the Board of Examiners for a BSc in Computer Science.

#### 37h. **MEng degree classification for students who commenced Year 1 before September 2010**

The degree classification will be determined according to the University-wide formula for four year non-clinical undergraduate degrees. The system is based on the use of an overall average of the weighted marks for years 2, 3 and 4 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.

The Board of Examiners is required to give special consideration to the cases of students whose performance might have been affected by ill health or other mitigating circumstances.

**37h(i). Credits to be passed**

To be eligible for the award of a classified undergraduate Masters degree, candidates must have passed modules totally 435 credits or more (including compensated marks), must have passed at least 75 credits of M level modules, and must have passed all mandatory modules. If candidates have failed modules worth more than 45 credits, or have not satisfied one of the other requirements for a classified MEng degree, they will not be eligible for the award of a Masters degree, but may be eligible for the award of a Bachelors degree.

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

The MEng Honours average for each student will be calculated from the Year 2 average weighted at 20%, the Year 3 average (excluding the Year 2 carry-forward mark) weighted at 40%, and the Year 4 average weighted at 40%. Note that, with respect to degree classification, re-sit marks will be capped at 40% for the purpose of calculating the average. 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%	3rd

**37h(iii). Profiling**

Candidates who achieve MEng Honours Averages in the ranges 67-69%, 57-59%, and 47-49% or 37-39%, i.e. missing automatic classification by no more than 3%, will have their mark profile considered. They will be awarded the higher class if:

- i) **either** a minimum of 180 credits of study in Years 2, 3 and 4 are in a higher class than the overall average mark and of these at least 60 credits have been achieved in Year 4.
- ii) **or** 210 credits across Years 2, 3 and 4 are in a higher class than the overall average mark.

**37h(iv). BSc Degree Classification for students failing to meet the MEng Degree Classification requirements**

Candidates with insufficient credits for an Integrated Master's degree at the end of Year 4 shall have the opportunity to re-sit failed fourth year modules at the next scheduled sitting. The mark obtained at the second attempt will be capped at the pass mark for the purposes of determining the final degree, except where the second attempt is allowed under mitigating circumstances.

Students who opt not to re-sit failed fourth year modules or who fail to meet the criteria for the award of a MEng (Hons) degree will be considered for the award of a BSc degree with or without honours according to the BSc degree classification scheme presented described in Section 37f.

If a candidate opts to exit at the end of Year 3 once the final Board of Examiners meeting has been held, they will be considered for the award at the final Board of Examiners meeting in the following year.

**37i. MEng degree classification for students who commenced Year 1 after September 2010**

The degree classification will be determined according to the University-wide formula for four year non-clinical undergraduate degrees. The system is based on the use of an overall average of the weighted marks for years 2, 3 and 4 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.

The Board of Examiners is required to give special consideration to the cases of students whose performance might have been affected by ill health or other mitigating circumstances.

### 37i(i). Credits to be passed

To be eligible for the award of a classified Integrated Master's degree, students must have passed modules totalling 450 credits or more (including compensated marks of 40% gained in Years 1 and 2) and must have passed all mandatory modules. If students have failed modules worth more than 30 credits or not passed the requisite number of M level credits, they will not be eligible for the award of a Master's degree, but may be eligible for the award of a Bachelor's degree.

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

The MEng Honours average for each student will be calculated from the Year 2 average weighted at 20%, the Year 3 average (excluding the Year 2 carry-forward mark) weighted at 40%, and the Year 4 average weighted at 40%. Note that, for the purpose of determining the average mark for profiling, re-sit marks will be capped at 40% (or 50% for M level modules), unless the re-sit is being treated as a first examination in cases of ill-health or other mitigating circumstances determined by the Board of Examiners (or, where appropriate, the Faculty Progress Committee). 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%	3rd

### 37i(iii). Profiling

- (i) 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.
- (ii) If a candidate is profiled, s/he will be awarded the higher class if at least 60 credits at M level are in the higher class; **and either**
  - at least 180 credits over years 2, 3 and 4 are in the higher class; **or**
  - at least 120 credits over years 3 and 4 are in the higher class.

### 37i(iv). BSc Degree Classification for students failing to meet the MEng Degree Classification requirements

Candidates with insufficient credits for an Integrated Master's degree at the end of Year 4 shall have the opportunity to re-sit failed fourth year modules at the next scheduled sitting. The mark obtained at the second attempt will be capped at the pass mark for the purposes of determining the final degree, except where the second attempt is allowed under mitigating circumstances.

Students who opt not to re-sit failed fourth year modules or who fail to meet the criteria for the award of a MEng (Hons) degree will be considered for the award of a BSc degree with or without honours according to the BSc degree classification scheme described in Section 37g.

If a candidate opts to exit at the end of Year 3 once the final Board of Examiners meeting has been held, they will be considered for the award at the final Board of Examiners meeting in the following year.

### 37i(v). Failure of Modules

If a student 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 has made a reasonable attempt at the assessments that were failed. 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. Award of alternative exit qualifications

Students who fails to meet the criteria for the award of a classified honours degree or a pass degree (Sections 37f to 37i), or who are unable to complete their degree programme, may be awarded one of the following qualifications:

- Certificate in Higher Education – this will be awarded provided that the student has obtained a pass in at least 120 credits at a level equivalent to the First Year of an Honours Degree.
- Diploma in Higher Education – this will be awarded provided that the student has achieved a minimum of 240 credits, of which not less than 120 credits are passed at a level equivalent to the Second Year of an Honours Degree.

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

### **37k. 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 Undergraduate 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 to programme structure for 2011-12:</b></p> <ul style="list-style-type: none"> <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), COMP329 (optional), COMP591 (mandatory), COMP592 (mandatory), optional modules at level M.</li> <li>• Removal of modules: 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 (COMP280-285) were positively received.</p> <p>COMP591 MEng Group Project was introduced in reaction to recommendations by the BCS following their most recent accreditation visit. COMP591 together with COMP592, each worth 30 credits, replace the previous 60 credit MEng Project. MEng year 3 students were separately consulted about this change.</p>	<b>Minor</b>		
<p><b>Nov 11: Amendment to entry requirements</b></p>	<b>Minor</b>		