

## Undergraduate Student Handbook

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## Welcome to New Students

Computer Science at the University of Liverpool has a history going back to the 1960s. As the subject grew in importance, the Department of Computer Science was created in 1982, to provide a focus for continued development within the University. Since then the Department has grown and flourished. We currently have over 40 members of academic staff and more than 15 members of professional services staff who provide excellent support for the running of the Department. We now expect to welcome around 300 new undergraduate students including a number from Xi'an Jiaotong Liverpool University (XJTLU) in China. Like other University departments, we see ourselves as having a dual role: in research, aimed at developing new knowledge and understanding of the subject of Computer Science, and in teaching and learning, through which we seek to pass on this knowledge and understanding to others. In our University, the two activities are interwoven, and both staff and students participate in both. The distinction between teachers and students is not as clear as it is in earlier education; we see learning as a co-operative process that requires effort from both sides. In addition to our research-led teaching provision, we also provide support for developing students' employability skills through a variety of formal and informal activities that students have the opportunity to participate in.

You will probably find that study at the University will be more open-ended and less tightly structured than you have been used to. It may take you some time, also, to familiarise yourself with the organisation and ways of working of the University and the Department. Don't worry if you find these changes difficult at first; you will not be the only one feeling this way. I am sure that you will soon get used to the new way of life and study that you find here. In addition to the support offered by staff, the Department has a lively student society, CompSoc, which organises a variety of activities for computer science students to get involved in and meet others who are also studying the subject at our University.

Finally, if you do encounter problems, with your work or otherwise, please remember that my colleagues and I are all here to help you in any way we can. Each student has an Academic Advisor who can be contacted to provide advice throughout the duration of their studies. We all hope that your time at the University of Liverpool will be a happy and rewarding experience for you, and we will do our best to make it so.

I look forward to getting to know you during the coming year.

Professor Katie Atkinson  
Head of Department of Computer Science

## Section 1 – Information about the Department

### 1.1 Introduction

The Department of Computer Science, together with the Department of Electrical Engineering and Electronics, is part of the School of Electrical Engineering, Electronics and Computer Science. The interface between computer science and electrical engineering is where hardware meets software, for example in the domain of signal processing. Although computer science also has strong connections with mathematics (for example in the field of algorithms) and to an extent philosophy (for example in the fields of logic programming and the theory of computation), the relation with electrical engineering means that the two departments within the school are well matched, thus allowing students in both departments to benefit from the experience and knowhow available across the entire school.

The Department of Computer Science is located in the Ashton and George Holt Buildings. The Ashton Building houses the offices of the academic and administrative staff and the George Holt Building houses mainly the technical staff and the computer laboratories. The two buildings are linked by a corridor on the second floor.

The Department aims to provide students with an understanding of the basic principles of computer science, the current state of knowledge of the subject, and its application to the processing of information in all aspects of life and work. In addressing these aims, the Department's undergraduate programmes all include a significant amount of material on the theory, design and implementation of computer systems while at the same time focusing on their individual specialist areas. We believe that all our degree programmes will provide students with skills that can be used immediately in industry and commerce as well as the broader view which is needed, for example to deal with issues arising from advances in technology, in management and in high level research. For more detailed information about the aims and philosophy of the Department see [Section 4.1](#).

### 1.2 Student Handbook

The purpose of this handbook is to give you information specific to the Department of Computer Science and your studies here. You will be able to find general information about the University, including the rules, regulations and policies governing your study, in the separate handbook 'Your University', which is available at [www.liv.ac.uk/student-administration/student-administration-centre/student-handbooks/](http://www.liv.ac.uk/student-administration/student-administration-centre/student-handbooks/); you should have received a hard copy of this at registration. In the unlikely event that the information provided here conflicts with the information provided in the "Your University" handbook, you should, unless officially informed otherwise, follow the information provided in the "Your University" handbook. There is also a wealth of information on the University and departmental websites which will help you throughout your studies.

This Handbook will be updated as required and you will be informed of updates via email or 'message of the day'. If you would like a hard copy of this handbook or require a special format, please contact the Student Office, (email [csstudy@liverpool.ac.uk](mailto:csstudy@liverpool.ac.uk), (0151) 795 4275). We would also welcome any suggestions and comments you may have.

### 1.3 Communication within the Department

**Email:** Incoming students are provided with a University email account and once your registration is completed, all University communications will be sent to this account. It is very important that you check this daily during term-time, and also regularly during vacation periods.

Email is usually not a good way to get an answer to an urgent query; you will generally get the information you need more readily by visiting the Student Office or seeing your tutor in class or during their office contact hours.

If you do email academic staff or professional services staff, please do so only from your University email account. Write in a professional, polite style, and remember to use an appropriate greeting and sign-off in all mails.

**When contacting the Student Office, it is important to indicate your student ID number, which degree programme you are on and your year of study in all communications.** In a School with over 800 students, this will help us to identify you more easily and respond to your enquiry.

Academic and professional services staff will not normally reply to emails outside of normal office hours—in other words you should not expect a reply to your email in the evenings or at the weekend.

Please try to find information in this handbook or through the School or University web pages in the first instance; if you cannot find what you are looking for, let us know so that we can post that information for the benefit of other students. The Student Office will also be able to answer many of your non-academic queries.

**External post:** If we need to contact you by letter, we will use your term time or permanent address as recorded on Liverpool Life. Please ensure that your addresses are correct at all times. If you have problems amending your address, please contact the Student Office (room G09, Ashton Building). **Please check that your postal details and mobile phone details are accurate and up to date!**

**Online communication:** Information about departmental systems and facilities may be communicated by means of a 'message of the day' when you log in to the departmental computer network. Information about particular modules may be provided via module specific web pages or the central University VITAL system. The Student Office also has a Twitter and Facebook account which is used to inform students of important events.

**VITAL:** Where applicable, students are expected to monitor information concerning their modules on the VITAL network regularly. Information about your programme will be communicated via your VITAL programme page.

**Noticeboards:** Student noticeboards are situated on the first floor of the George Holt Building adjacent to Lab 1. General information including details of the Staff Student Liaison Committee, COMPSOC and careers will be found here. Exam related information is displayed on the noticeboard outside the Helpdesk on the second floor and in the Student Office on the ground floor of the Ashton Building.

## 1.4 Online Attendance/Coursework Database

The Department maintains a database which contains information about student activity, including attendance and assessed coursework. This can be accessed at:

<https://sam.csc.liv.ac.uk/COMP/>

By logging into this database with your departmental computer password, you will be able to view your personal attendance record, the date and time of any coursework submitted, and deadlines for coursework. See also Sections [4.4.1](#) and [5.1.3](#).

## 1.5 Student Representation within the Department

The views of students are valued by the Department and students are encouraged to provide feedback relating both to the content and provision of their programme of study, and also to any other aspects of the overall University environment.

Students should feel able to provide informal feedback to any member of staff. However there are several mechanisms for providing formal feedback:

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### 1.5.1 Staff Student Liaison Committee

The School tries to be as open as possible in the way it runs, and students are encouraged to make their views heard. This is not to say every opinion will be acted upon because ultimately academic staff are responsible for using their judgement about how their subject should be taught and assessed. However, student opinion will always be listened to and seriously considered.

To facilitate this, staff/student liaison committees are run across the School usually once per semester. All students (undergraduate and postgraduate, including joint and combined honours students, both full- and part-time taking modules in the School) are invited to stand for election on the appropriate committee and are provided with training and support from the Guild of Students.

Staff/student liaison committees are formal but friendly forums for students to raise issues of general concern about their studies; they cannot deal with matters of an individual or personal nature. They may also be used to consult with students on policy changes, curriculum development, assessment, feedback, etc.

If you are interested in becoming a student representative please contact the Student Office. Elections (where required) are normally held at the start of the academic session and students may serve as representatives for one year or throughout their studies if they wish.

The Department operates an Undergraduate Staff Student Liaison Committee (SSLC) which comprises members of staff and student representatives from each year of study. One of the Committee members is also nominated to represent students at meetings of the Board of Studies. The contact for matters relating to the SSLC and undergraduate student representation in general is Prof Boris Konev (see [Section 2.1](#) for contact details).

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### 1.5.2 Representation on Committees

There are committees at Faculty and Department Level and both include student representation on their membership. Committee reps are usually recruited through the SSLCs and you will hear more about these opportunities at the first SSLC meeting. You can also find out more by contact the

Faculty Student Voice Coordinator who is based in the Guild but works very closely with staff in the faculty of Science and Engineering

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### **1.5.3 End of Module Questionnaires**

You will be invited to complete a questionnaire on each module that you study. Please make every effort to complete this, as comments are noted and can help to lead to improvements in content/delivery.

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### **1.5.4 End of Year Questionnaires**

Over the years we have invited to complete an end of year questionnaire at the end of each year of study. Again, your views are important and will be considered by the Department.

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### **1.5.5 National Student Survey**

This survey is completed by final year students throughout the country towards the end of their study. Results are published nationally and allow prospective students to compare overall satisfaction at different institutions.

## **1.6 Student Society**

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### **1.6.1 COMPSOC**

The departmental student society is known as COMPSOC and all students in the Department are welcome to join. This society, which is associated with the University's Guild of Students, is run by students and involves various social and sporting activities. Further information can be found on the COMPSOC noticeboard (outside Lab 1 on the first floor of the George Holt Building), or by contacting the Student Office or the Departmental Coordinator, Prof Prudence Wong ([P.Wong@liverpool.ac.uk](mailto:P.Wong@liverpool.ac.uk)). The society also has a Facebook page, which can be found here: <https://www.facebook.com/groups/livcompsoc/>

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### **1.6.2 Computer Science Football Team**

Computer Science FC is an 11 a-side football team that plays in the campus football Wednesday division and trains every Saturday from 5-6pm at Wyncote Sports Ground. Trials for 2017/18 season will be held on Saturday 23rd September during the training slot at Wyncote, from 5-6pm. To get to Wyncote, you can take the 86 or 86A bus routes from south campus or a 15-20 minute walk from Carnatic or Greenbank Halls of Residence. If you have any further questions about the team or the trial session please contact the team captain, Adam Hawkins, via his email address: [A.Hawkins3@student.liverpool.ac.uk](mailto:A.Hawkins3@student.liverpool.ac.uk).

## **1.7 Departmental Events**

The Department holds weekly seminars which are open to students. Speakers include leading international researchers from the UK and beyond. The topics cover a wide range of computer science research. For details please see <http://intranet.csc.liv.ac.uk/research/seminars/>

From time to time, outside companies visit the Department to talk about careers. You will be advised of any such events by e-mail, and posters will also be displayed on the noticeboards.



## 1.8 Opportunities to Enhance Your CV

In today's competitive job market, it is advisable for students to consider ways of enhancing their CVs. The Department offers the following opportunities:

### 1.8.1 A Year in China

The Year in China is The University of Liverpool's exciting flagship programme enabling undergraduate students, from a huge range of departments the opportunity to spend one year at our sister university, Xi'an Jiaotong-Liverpool University (XJTLU), following XJTLU's BA China Studies degree classes. Students have the opportunity (subject to their first year academic performance) to spend their second year in China. XJTLU is based in Suzhou, which is about 45 minutes by train from Shanghai. The programmes at XJTLU closely match those in Liverpool and all subject-specific teaching is in English. Students remain in contact with their academic advisor in the Department and also receive advice from the Link Tutor, Prof Prudence Wong.

### 1.8.2 Study Abroad

A part of our degree programme you may have the opportunity to study abroad. Studying abroad has huge personal and academic benefits, as well as giving you a head start in the graduate job market. We wish to share good links with a wide range of worldwide exchange partners, resulting in many opportunities for students.

For more information, visit <http://www.liv.ac.uk/study/undergraduate/goabroad/>

### 1.8.3 Voluntary Work in the Department

#### Peer Mentoring

Each year the Department requires a number of students to be trained as peer mentors. Once trained, the peer mentor is linked to a small number of new students whom they will meet during Welcome Week or shortly after the start of the academic year. Their role is to offer practical advice to help new students settle into University life.

#### Assisting with Open Days/Discovery Days

There are a number of occasions throughout the year when prospective students and their parents visit the Department to finalise their choice of a place to study. Current students are an important part of these visits and we generally look for a small number to help show visitors around the Department and to answer their questions.

## 1.9 Fire Alarms/Safety

If you have any problems or questions about safety, please raise them with a member of staff or with the Departmental Safety Coordinator. See [Section 2.4](#). The fire alarm in the Ashton building is tested weekly on a Wednesday at around 9:50. The fire alarm in the George Holt building is tested weekly on a Tuesday at around 10:00. If the fire bells ring continuously for longer than this (or at any other time), you should immediately leave the building by the nearest exit. Do not stop to collect personal items, or linger in the building. Do not use the lifts. Assemble in the quadrangle and do not attempt to re-enter the building until told by the fire safety officer that it is safe to do so. The Department has an EVAC chair in the George Holt building – this is a universal evacuation solution for smooth stairway descent during an emergency.

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Once a year, a fire safety evacuation practice will be held. The alarm will be sounded and the bells will ring continuously. This should be treated as if it were a real fire, and everyone should leave the building immediately.

## Section 2 – Contacts

A list of all staff including rooms and telephone numbers can be found on the departmental website at <http://intranet.csc.liv.ac.uk/people/staff.php>. The sections below list the key contacts in the Academic, Professional Services and Technical staff.

### 2.1 Academic Staff

If you wish to see any member of the academic staff, please contact them by e-mail in the first instance to arrange a mutually convenient time. Module co-ordinators will also schedule office hours or drop-in sessions for their modules.

Role	Name	E-mail	Room
Head of Department	Prof Katie Atkinson	<a href="mailto:K.M.Atkinson@liverpool.ac.uk">K.M.Atkinson@liverpool.ac.uk</a>	215
Chair, Board of Studies	Prof Paul Dunne	<a href="mailto:P.E.Dunne@liverpool.ac.uk">P.E.Dunne@liverpool.ac.uk</a>	204
Disability Officer	Mr Phil Jimmieson	<a href="mailto:phil@liverpool.ac.uk">phil@liverpool.ac.uk</a>	120
European Liaison Officer/Study Abroad (Erasmus/Socrates)	Dr Floriana Grasso	<a href="mailto:F.Grasso@liverpool.ac.uk">F.Grasso@liverpool.ac.uk</a>	G16
Examination Officer	Dr André Hernich	<a href="mailto:hernich@liverpool.ac.uk">hernich@liverpool.ac.uk</a>	113
Academic Integrity and Assessments Officer	Dr Alexei Lisitsa	<a href="mailto:lisitsa@liverpool.ac.uk">lisitsa@liverpool.ac.uk</a>	118
Chair, UG Board of Examiners	Prof Paul Dunne	<a href="mailto:P.E.Dunne@liverpool.ac.uk">P.E.Dunne@liverpool.ac.uk</a>	204
Chair, Extenuating Circumstances	Dr Igor Potapov	<a href="mailto:potapov@liverpool.ac.uk">potapov@liverpool.ac.uk</a>	315
School Publicity/Contact with Industry	Dr Terry Payne	<a href="mailto:T.R.Payne@liverpool.ac.uk">T.R.Payne@liverpool.ac.uk</a>	218
Undergraduate Programme Directors	Dr David Jackson G400, G401, G404, G490, G500, G501, G610, GZ10, G700	<a href="mailto:DJackson@liverpool.ac.uk">DJackson@liverpool.ac.uk</a>	G17
	G40E	TBC	
	Dr Valentina Tamma G402, G403, G491, G502, G503, G611, G61Z, G701	<a href="mailto:V.Tamma@liverpool.ac.uk">V.Tamma@liverpool.ac.uk</a>	212
	Mr Sebastian Coope GG14, GG16	<a href="mailto:coopess@liverpool.ac.uk">coopess@liverpool.ac.uk</a>	G18
	Dr Giorgos Christodoulou GN34, G3N4	<a href="mailto:G.Christodoulou@liverpool.ac.uk">G.Christodoulou@liverpool.ac.uk</a>	224
Deputy Programme Director	Dr Rahul Savani (Deputy)	<a href="mailto:Rahul.Savani@liverpool.ac.uk">Rahul.Savani@liverpool.ac.uk</a>	H215
Postgraduate Programme Director	Dr John Goulermas CSMS, CSAD, CSCI, CMBD, CMBI, CSAI, CSCN	<a href="mailto:goulerma@liverpool.ac.uk">goulerma@liverpool.ac.uk</a>	219
Senior Tutor	Dr David Jackson	<a href="mailto:djackson@liverpool.ac.uk">djackson@liverpool.ac.uk</a>	G17

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Role	Name	E-mail	Room
UG Staff-Student Liaison Committee (Student Representation Officer)	Prof Boris Konev	<a href="mailto:Konev@liverpool.ac.uk">Konev@liverpool.ac.uk</a>	115

## 2.2 Professional Services Staff

The professional services staff provide administrative support to the Department. The Student Experience Team is responsible for all matters relating to students and the first point of contact for students is the Student Office, which is located on the ground floor of the Ashton Building. The office is open Monday to Friday all year round from 9.15 to 16.45, with the exception of Wednesday afternoons when it closes at 14:00. The members of the Student Experience Team are as follows:

Role	Name	E-mail	Tel	Location
Student Experience Team Leader	Mrs Jan Harding	<a href="mailto:jharding@liverpool.ac.uk">jharding@liverpool.ac.uk</a>	0151 794 4511	5 <sup>th</sup> floor, Electrical Engineering & Electronics (building no 235)
Student Experience Co-ordinator	Mrs Judith Birtall	<a href="mailto:judith.birtall@liverpool.ac.uk">judith.birtall@liverpool.ac.uk</a>	0151 795 8459	Student Office, ground floor, Ashton Building
Student Experience Administrator	Miss Lindsay Chadwick	<a href="mailto:lindsay.chadwick@liverpool.ac.uk">lindsay.chadwick@liverpool.ac.uk</a>	0151 795 4234	
On-Line Student Experience Administrator	Mrs Helen Mattocks	<a href="mailto:h.bradley@liverpool.ac.uk">h.bradley@liverpool.ac.uk</a>	0151 795 4276	
Student Experience Administrative Assistant	Miss Bethan Birch	<a href="mailto:bethan21@liverpool.ac.uk">bethan21@liverpool.ac.uk</a>	0151 795 4275	

## 2.3 Technical Staff

The first point of contact for students with queries relating to the departmental computer system is the Helpdesk, which is located on the second floor of the George Holt Building. During term time, it is open Monday to Friday from 10:30 to 12:30 and 14:00 to 15:30 (except Wednesday afternoons). Technicians are available in the Helpdesk on a rota basis as follows:

Name	E-mail	Tel
Mr Andrew Craig	<a href="mailto:csc-helpdesk@liverpool.ac.uk">csc-helpdesk@liverpool.ac.uk</a>	0151 795 4287
Mr Patrick Colleran		
Mr Dave Nixon		
Mr Dave Shield		

## 2.4 Health and Safety Contacts

Role	Name	E-mail	Tel.	Location
Departmental Safety Coordinator	Mr Phil Jimmieson	<a href="mailto:P.Jimmieson@liverpool.ac.uk">P.Jimmieson@liverpool.ac.uk</a>	0151 795 4236	Room 120, Ashton Building
First Aider	Miss Rebekah Martin	<a href="mailto:Rebekah.Martin@liverpool.ac.uk">Rebekah.Martin@liverpool.ac.uk</a>	0151 795 4273	Room G07, Ashton Building
First Aider	Mr Andrew Craig	<a href="mailto:acraig@liverpool.ac.uk">acraig@liverpool.ac.uk</a>	0151 795 4269	Room H205, George Holt Building

## 2.5 Contact Details for the Department

**Address:** Ashton Building  
Ashton Street  
Liverpool  
L69 3BX

**Tel:** 0151 795 4275

**Fax:** 0151 795 4235

**Student Office email:** [csstudy@liverpool.ac.uk](mailto:csstudy@liverpool.ac.uk)

**Helpdesk email:** [csc-helpdesk@liverpool.ac.uk](mailto:csc-helpdesk@liverpool.ac.uk)

**External website:** <http://www.liv.ac.uk/computer-science/>

**Intranet:** <http://intranet.csc.liv.ac.uk/>

**Facebook:** <https://www.facebook.com/groups/1459307740971304/>

## Section 3 – Programme Information

### 3.1 Introduction

The Board of Studies in Computer Science has overall responsibility for all aspects of the provision and assessment of undergraduate and taught postgraduate programmes within the Department. The Undergraduate Board comprises key academic members of staff and is chaired by Prof Paul Dunne. In addition, each of our degree programmes has a Director of Studies who is responsible for the day to day running of the programme. There are five such directors within the Department: Dr Giorgos Christodoulou/Deputy: Dr Rahul Savani (GN34, formally known as N300 and G3N4), Dr David Jackson (G400, G401, G404, G490, G500, G501, G610 and G700), Dr Valentina Tamma (Year in Industry programmes) and Mr Sebastian Coope (GG14 and GG16). For information on G40E, please speak to the Student Office.

### 3.2 Programmes administered by the Department of Computer Science

Below is a brief description of the programmes offered by the Department. Detailed information about the programmes can be found at <http://intranet.csc.liv.ac.uk/teaching/programmes/>. A list of modules in each programme is given in [Section 3.6](#) below.

#### 3.2.1 Three Year Degree Programmes

##### G400 BSc (Hons) Computer Science:

This programme is directed at students with 'AS' level (or equivalent) in Mathematics and includes a significant amount of material relating to the theory of Computer Science. From 2017/18, students can choose to maintain a mixture of modules throughout their degree or follow a specialism pathway in

- **Artificial Intelligence**  
*This is an exciting and revolutionary field of Computer Science, with cutting-edge applications in areas as diverse intelligent robotics and autonomous vehicles, healthcare, law, climate change and computer games.*
- **Algorithms and Optimisation**  
*Algorithms are at the heart of every computer system. This specialism will introduce students to the fascinating world of design, analysis and the optimisation of algorithms, covering a wide range of relevant areas from finance to information security, and from biological systems to social networks.*
- **Data Science**  
*This prepares students to fill the looming employment gap in the field of big data analytics, especially in the context of the skills required with respect to the application of High Performance Computing capabilities to address large scale data intensive problems that occur in many fields.*

Further information regarding this can be found in **Appendix B**.

**GZ10 BSc (Hons) Computer Science with Software Development:**

Software developers bring system designs to life. This specialism prepares students to build commercial-ready systems in prominent domains such as networks, the Web, mobile apps and computer games.

*Please note that from 2018/19 the following programmes will be phased out to accommodate the new structures with specialism pathways drawn up during a review of the Year 1 and 2 programme provisions.*

**G490 BSc (Hons) Electronic Commerce Computing:**

Electronic commerce (e-commerce) has evolved from what was essentially a marketing tool to provide a storefront for enterprises, to a maturing industry affecting every aspect of contemporary enterprise. This programme is designed to equip students with the necessary computer skills to build eCommerce applications while at the same time ensuring that students have an appropriate grounding in the business studies related aspects of the subject.

**G500 BSc (Hons) Computer Information Systems:**

This programme is addressed in particular to students with a non-science background. The specific aim of this programme is to meet the needs of students who may be seeking a career involving the use of computers in some particular application area, especially those outside the traditional fields of science and engineering.

**G501 BSc (Hons) Internet Computing:**

The development of the Internet has been the most important innovation in computing since the origins of the field itself. This programme seeks to provide students with the necessary knowledge and abilities to exploit and develop the potential of the Internet. At the same time it will allow students to study an evolving branch of Computer Science that is pushing at the boundaries of technology.

**G610 BSc (Hons) Software Development:**

Information technology continues to spread rapidly throughout most areas of society. Within this the development, updating and widespread application of software is the most time-consuming, difficult and expensive aspect. Developing efficient, robust and correct software is inherently complex, and this programme focuses on this important field of Computer Science covering fundamental principles to professional and practical issues.

**G700 BSc (Hons) Artificial Intelligence:**

Artificial Intelligence is one of the most important sub-fields of Computer Science and has a high profile with respect to popular recognition of activities associated with Computer Science. This specialist programme also ensures that students have a thorough grounding in basic computer science and computer information systems.

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**3.2.2 Four Year Degree Programmes**

**G401 MEng (Hons) Computer Science:**

This programme is designed for students who wish to include an element of research/near-research work in their undergraduate study. The programme comprises four years of study, with the first

three years following the same programme as G400 students. The fourth year comprises four research-oriented taught modules, an individual project and a group project.

**[G40E MEng \(Hons\) Computer Science with Education \(with recommendation for Qualified Teacher Status\):](#)**

This is an opt-in programme after Year 2. The aim of the programme is to produce graduates who will have a complete and systematic understanding of the domain of computer science while at the same time gaining Qualified Teacher Status. As such this will enable students who successfully complete the programme to take up a rewarding career as teachers of Computer Science in schools. The programme is also designed equip students with the necessary skills required with respect to careers open to general Computer Science graduates.

**Degree Programmes with a Year in Industry:**

**[G403 BSc \(Hons\) Computer Science with a Year in Industry](#)**

**[G404 MEng \(Hons\) Computer Science with a Year in Industry](#)**

**[G3N4 BSc \(Hons\) Financial Computing with a Year in Industry](#)**

**[GG16 BSc \(Hons\) Mathematics and Computer Science with a Year in Industry](#)**

Please note that from 2018/19 the following programmes will be phased out to accommodate the new structures with specialism pathways drawn up during a review of the Year 1 and 2 programme provisions.

**[G402 BSc \(Hons\) Computing with a Year in Industry](#)**

**[G491 BSc \(Hons\) Electronic Commerce Computing with a Year in Industry](#)**

**[G502 BSc \(Hons\) Computer Information Systems with a Year in Industry](#)**

**[G503 BSc \(Hons\) Internet Computing with a Year in Industry](#)**

**[G611 BSc \(Hons\) Software Development with a Year in Industry](#)**

**[G701 BSc \(Hons\) Artificial Intelligence with a Year in Industry](#)**

These programmes address both the requirement to provide a core technical skill base and to equip students with an appreciation of how such skills will be used in practical commercial settings. They all follow the same structure as their equivalent programme without the year in industry but include a one-year placement with a commercial organisation in the third year.

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### **3.2.3 Joint Degree Programme**

**[GG14 BSc \(Hons\) Mathematics and Computer Science:](#)**

This programme combines the theory and practice of mathematics and computer science. The programme provides theoretical knowledge in mathematics that is fundamental to the computer science discipline and introduces concrete applications in computer science. Students will develop initiative by tackling problems in a rational analytic manner and forming balanced judgements.

**[GN34 BSc \(Hons\) Financial Computing \(Formally known as N300 E-Finance\):](#)**

Financial Computing is the provision of financial services and markets using electronic communication and computation. This programme is designed to address the demand for graduates who have both the necessary computer skills and the knowledge of financial products to



build finance applications. This programme is based in the Department of Computer Science and is taught in conjunction with the Management School.

### 3.3 Programmes offered by other Departments

#### 3.3.1 Joint Degree Programmes with the Department of Electrical Engineering and Electronics

[HH66 BEng \(Hons\) Computer Science and Electronic Engineering/](#)

[GHK6 MEng \(Hons\) Computer Science and Electronic Engineering:](#)

[HG6L BEng \(Hons\) Computer Science and Electronic Engineering with a Year in Industry](#)

The aim of these programmes is to teach those aspects of Computer Science that have applications to Electronic Engineering while at the same time giving a balanced treatment of both subjects.

The Computer Science modules taken by each programme are given in [Section 3.7](#).

This handbook concentrates on the computing-related aspects of these degree programmes; please consult the links below for full details of the corresponding programme.

**HH66:**

<http://www.liv.ac.uk/study/undergraduate/courses/computer-science-and-electronic-engineering-beng-hons/overview/>

**GHK6:**

<http://www.liv.ac.uk/study/undergraduate/courses/computer-science-and-electronic-engineering-meng-hons/overview/>

**HG6L:**

<http://www.liv.ac.uk/study/undergraduate/courses/computer-science-and-electronic-engineering-with-year-in-industry-beng-hons/overview/>

### 3.4 Change of Programme of Study

It is possible that, having started out on a particular programme, you decide that you would prefer to follow one of the alternative degree programmes provided within Computer Science. Depending on the programme into which you wish to transfer, such changes can normally be accommodated as late as the end of your second year of study. However, you should note that it will **not** normally be possible to change your programme of study once you have started the final (Honours) year. It is also not normally possible to transfer between programmes if you are taking either GN34 (formally known as N300) or GG14 since these programmes involve modules from other departments and are structured differently.

If you are concerned that your current programme does not suit you, then you should first discuss this with your Academic Advisor or the appropriate Director of Studies. Please note the conditions below affecting change of programme.

If you decide to proceed, you should obtain and complete a Transfer Form (available from the Student Office). **This form must be signed by the Director of Studies and returned to the Student**

**Office** in order for the change of programme to be implemented. All international students will also need the form signing by the International Support Team.

### 3.4.1 Conditions affecting Change of Programme

Please note that the changes below relate to students on single honours degree programmes only.

Change of Programme to	Time	Conditions
G400 G700	During Year 1 or start of Year 2	Students must have the appropriate mathematical pre-requisite (AS Level Mathematics at grade B or equivalent). However, students lacking the necessary mathematical background may be given approval if they perform very well during their first year of study, particularly on the modules COMP108 Algorithmic Foundations and COMP109 Foundations of Computer Science.
G401	Start of year 3	This is normally considered for G400, G403, G700 and G701 students at the end of the second year of study.
G500	Up to start of Year 3	This is possible from any single honours degree programme.
G490 G501 G610	No later than start of Year 2	This would be dependent on Year 1 examination performance.
Programmes offering a year in industry	No later than start of Year 2	This would be dependent on Year 1 examination performance.

### 3.4.2 Change of Programme due to Failure of a Mandatory Module

The programmes listed below have a mandatory module which must be passed with a mark of at least 40. The following options are available to students who achieve a compensatable fail (a mark of 35-39) and have otherwise satisfied progression requirements.

Programme	Mandatory Module	Option
G490	COMP211	Resit or transfer to G500
G501	COMP211	Resit or transfer to G500
G610	COMP201	Resit or transfer to G500
G700	COMP219	Resit or transfer to G400 or G500

**Note:** Students who opt to resit a mandatory module and achieve an appropriate standard would not subsequently be allowed to change programme.

### 3.4.3 Change of Programme with a Year in Industry

Students on these programmes must pass their second year of study at first attempt in order to proceed to the placement year. Students who fail to do so will be transferred to the corresponding programme without a year in industry or, in the case of G402, to G500.

## 3.5 Professional Accreditation

The single honours degree programmes, G400, G403, G402, G490, G491, G500, G501, G502, G503, G610, G611, G700 and G701, are all accredited by the British Computer Society (BCS). These programmes fully meet the academic requirement for registration for CITP (Chartered IT Professional) and partially meet the academic requirement for CEng (Chartered Engineer) registration and CSci (Chartered Scientist).

The MEng degree programme, G401, fully meets the academic requirement for registration for CITP (Chartered IT Professional) and CITP Further Learning and fully meets the academic requirement for registration as CEng (Chartered Engineer) and CSci (Chartered Scientist).

The BCS last visited the Department in October 2014 and the programmes are accredited until 2019. Further information about BCS accreditation can be found on the BCS website <http://www.bcs.org.uk/>. Further details on BCS membership are available from the Student Office (room G09).

The Institute of Engineering and Technology similarly accredits the Degree in Computer Science and Electronic Engineering (HH66), providing a route to Chartered Engineer status.

## 3.6 Programme Structures: Programmes administered by the Department of Computer Science

For information regarding the programme structures, please note the following:

- 1. Appendix A of the UG Student Handbook**  
for students who commenced their programme in 2016-17 or earlier;
- 2. Appendix B of the UG Student Handbook**  
for students who commenced their programme in 2017-18.

If you require any further information, please contact the Student Office.

## 3.7 Programme Structures: Programmes administered by other Departments

For information regarding the programme structures, please note the following:

- 1. Appendix A of the UG Student Handbook**  
for students who commenced their programme in 2016-17 or earlier;
- 2. Appendix B of the UG Student Handbook**

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for students who commenced their programme in 2017-18.

If you require any further information, please contact the Student Office.

### 3.8 Summary Information on Modules

#### 3.8.1 Computer Science Modules

Code	Title	Credits	Semester	Pre-requisites	Co-requisites	% CA	% Exam	Lecturer
<b>Level 4</b>								
COMP101*	Introduction to Programming	15	1	-	-	100	0	Mr Keith Dures
*For this module failure to submit a single piece of assessed work will lead to a failing mark in this module (all assessments need to be classed as a reasonable attempt).								
COMP105	Programming Language Paradigms	15	1	-	-	100	0	Dr John Fearnley
COMP107	Graduates for the Digital Society	15	1	-	-	100	0	Dr Floriana Grasso
COMP108	Data Structures and Algorithms	15	2	COMP109	-	40	60	Prof Prudence Wong
COMP109	Foundations of Computer Science	15	1	-	COMP101	20	80	Dr Boris Konev
COMP111	Introduction to Artificial Intelligence	15	1	-	-	20	80	Prof Frank Wolter
COMP116	Analytic Techniques for Computer Science	15	2	-	-	20	80	Prof Paul Dunne
COMP122	Object-Oriented Programming	15	2	-	-	100	0	Dr Russell Martin
COMP124	Computer Systems	15	2	-	-	20	80	Dr David Jackson
<b>Level 5</b>								
COMP201	Software Engineering I	15	1	COMP101	-	20	80	Mr Sebastian Coope
COMP202	Complexity of Algorithms	15	2	COMP108	-	20	80	Prof Piotr Krysta
COMP207	Database Development	15	1	COMP101	-	20	80	Dr André Hernich
COMP208	Group Project	15	2	COMP101 COMP201 COMP207	-	100	0	Dr Michele Zito

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Code	Title	Credits	Semester	Pre-requisites	Co-requisites	% CA	% Exam	Lecturer
COMP211	Internet Principles	15	1	COMP101	-	20	80	Dr Martin Gairing
COMP212	Distributed Systems	15	2	COMP101	-	20	80	Dr Othon Michail
COMP213	Advanced Object-Oriented Programming	15	1	COMP101	-	50	50	Dr Vitaliy Kurlin
COMP214	AI Group Project	15	2	COMP101 COMP213	-	100	0	Dr Michele Zito
COMP215	E-Commerce Group Project	15	2	COMP101 COMP207 COMP211 COMP213	-	100	0	Dr Michele Zito
COMP216	Internet Computing Group Project	15	2	COMP101 COMP207 COMP211 COMP213	-	100	0	Dr Michele Zito
COMP218	Decision, Computation & Language	15	2	COMP108 COMP109	-	20	80	Dr Dominik Wojtczak
COMP219	Artificial Intelligence	15	1	COMP101	-	20	80	Dr Frans Oliehoek
COMP220	Software Development Tools	15	2	COMP101 COMP201	-	20	80	Mr Sebastian Coope
COMP221	Planning your Career (commencing 2018/19)	7.5	1	-	-	100	0	Dr Valentina Tamma
COMP222	Principles of Computer Game Design and Implementation	15	2	COMP213 COMP219	-	20	80	Dr Xiaowei Huang
COMP226	Computer-Based Trading in Financial Markets	15	2	-	-	20	80	Dr Rahul Savani
COMP281	Principles of C and Memory Management	7.5	2	COMP213	-	100	0	tbc
COMP282	Advanced Object Oriented C Languages	7.5	2	COMP281	-	100	0	Dr David Jackson
COMP283	Applied Database Management	7.5	2	COMP207	-	100	0	Mr Phil Jimmieson

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Code	Title	Credits	Semester	Pre-requisites	Co-requisites	% CA	% Exam	Lecturer
COMP284	Scripting Languages	7.5	2	COMP101	-	100	0	Dr Ullrich Hustadt
COMP285	Computer Aided Software Development	7.5	2	COMP101 COMP201	-	100	0	Mr Sebastian Coope
<b>Year in Industry</b>								
COMP299	Industrial Placement Year 3	120	1&2	COMP221	-	100	0	Dr Valentina Tamma
<b>Level 6</b>								
COMP304 (taught with COMP521)	Knowledge Representation & Reasoning	15	1	COMP219	-	25	75	Dr Louwe Kuijer
COMP305	Biocomputation	15	1	-	-	20	80	Dr Irina Biktasheva
COMP309	Efficient Sequential Algorithms	15	1	COMP202	-	20	80	Dr Igor Potapov
COMP310	Multi-Agent Systems	15	2	-	-	0	100	Dr Terry Payne
COMP313	Formal Methods	15	2	COMP201	-	0	100	Prof Michael Fisher
COMP315	Technologies for E-Commerce	15	2	COMP207	-	0	100	Dr Vitaliy Kurlin
COMP318	Advanced Web Technologies	15	2	COMP211 COMP212	-	20	80	Dr Valentina Tamma
COMP319	Software Engineering II	15	1	COMP201	-	0	100	Mr Sebastian Coope
COMP323	Introduction to Computational Game Theory	15	1	COMP109 or equivalent mathematical module	-	20	80	Prof Paul Spirakis
COMP324	Complex Information and Social Networks	15	2	-	-	20	80	Dr Michele Zito
COMP326 (taught with COMP559)	Computational Game Theory and Mechanism Design	15	2	COMP109 COMP323	-	20	80	Dr Giorgos Christodoulou
COMP327	Mobile Computing	15	1	-	-	40	60	Mr Phil Jimmieson

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Code	Title	Credits	Semester	Pre-requisites	Co-requisites	% CA	% Exam	Lecturer
COMP329	Robotics and Autonomous Systems	15	1	-	-	100	0	Dr Terry Payne
COMP331 (taught with COMP557)	Optimisation	15	1	-	-	25	75	Dr Martin Gairing
COMP335	Communicating Computer Science	15	1&2	-	-	100	0	Dr Davide Grossi
COMP390	Honours Year Computer Science Project	30	1&2	Completion of Year 2 in G400, G402, G500 or G610	-	100	0	Dr Irina Biktasheva
COMP391/ COMP392	Final Year 15 Credit Project	15	1 or 2	Completion of 60 credits in 2 <sup>nd</sup> year programme in Computer Science	-	100	0	
COMP393	Honours Year Artificial Intelligence Project	30	1&2	Completion of Year 2 in G700 or G500	-	100	0	
COMP394	Honours Year Electronic Commerce Computing Project	30	1&2	Completion of Year 2 in G490, G500 or G610	-	100	0	
COMP395	Honours Year Internet Computing Project	30	1&2	Completion of Year 2 in G501, G500 or G610	-	100	0	
COMP396	Honours Year Automated Trading Project	30	1&2	Completion of Year 2 in GN34	-	100	0	
<b>Level 7</b>								
COMP516	Research Methods in Computer Science	15	1	Successful completion of first three years of MEng Computer Science	-	100	0	Dr Dominik Wojtczak/Dr Othon Michail
COMP521 (taught with COMP304)	Knowledge Representation	15	1		-	25	75	Dr Louwe Kuijer
COMP522	Privacy and Security	15	1		-	25	75	Dr Alexei Lisitsa

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Code	Title	Credits	Semester	Pre-requisites	Co-requisites	% CA	% Exam	Lecturer
COMP523	Advanced Algorithmic Techniques	15	1		-	25	75	Prof Darek Kowalski
COMP524	Safety and Dependability	15	2		-	25	75	Prof Sven Schewe
COMP525	Reasoning about Action and Change	15	2		-	25	75	Dr Clare Dixon
COMP526	Applied Algorithmics	15	2		-	25	75	Prof Leszek Gasieniec
COMP527	Data Mining and Visualisation	15	2		-	25	75	Dr Danushka Bollegala
COMP528	Multi-Core and Multi-Processor Programming	15	1		-	60	40	Dr Alexei Lisitsa
COMP532	Machine Learning and BioInspired Optimisation	15	2	COMP219 COMP310	-	25	75	Dr Shan Luo
COMP590	MEng Final Year Project	60	2	Successful completion of first three years of MEng Computer Science	-	100	0	Dr Irina Biktasheva
COMP591	MEng Group Project	30	1		-	100	0	
COMP592	MEng Individual Project	30	2		-	100	0	

\* The assignments on both COMP282 and COMP327 require the use of various Apple Development applications (Xcode, Interfact Builder) and libraries (like Cocoa and Cocoa Touch) on MacOS X. All relevant software is available in our Mac Lab.

### 3.8.2 Management School Modules

Further information about the modules listed below is available at <https://www.liverpool.ac.uk/study/undergraduate/courses/business-management-ba-hons/module-details/>

All modules are worth 15 credits.

Code	Title	Semester	Pre-requisites	% CA	% Exam	Lecturer
<b>Level 4</b>						
ACFI101	Introduction to Financial Accounting	1	-	30	70	Mr LW Gordon



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Code	Title	Semester	Pre-requisites	% CA	% Exam	Lecturer
ACFI102	Introduction to Management Accounting	2	-	0	100	Mrs G Waddell
ACFI103	Introduction to Finance	2	-	0	100	Mr M Drape
ECON121	Principles of Microeconomics	1	-	20	80	Mr BK Banerji
<b>Level 5</b>						
ACFI201	Financial Reporting 1	1	ACFI101 or ACFI104	0	100	Mrs C Mallanaphy
ACFI202	Accounting Theory	2	ACFI201	30	70	Dr S Akbar
ACFI204	Financial Management	1	ACFI102 or ACFI103 and either ACFI111 or ECON111 or equivalent.	0	100	Mr JP Laws
ECON241	Securities Markets	2	ECON121 or ECON123 or ACFI103	0	100	Mrs EM Apps
MKIB225	International Business	2	-	50	50	Dr CA Belfrage
<b>Level 6</b>						
ACFI302	Corporate Reporting and Analysis	2	ACFI101 ACFI201 ACFI309	30	70	Mrs C Mallanaphy
ACFI314	Quantitive Business Finance	1	ACFI204	20	80	Prof KC Milas
ACFI309	Financial Reporting 2	1	ACFI101 ACFI201	0	100	Mr K Maguire
ACFI341	Finance and Markets	2	ACFI314	20	80	Prof C Florakis
EBUS301	E-Business Models and Strategy	1	-	100	0	Mr SP Snowden
MKIB351	Global Strategic Management	1	MKIB225 or MKIB253	40	60	Dr G Solinas

### 3.8.3 Mathematics modules (all 15 credits)

Code	Title	Semester	Pre-requisites	% CA	% Exam	Lecturer
<b>Level 4</b>						
MATH101	Calculus 1	1	A Level Mathematics.	20	80	Dr JM Woolf
MATH102	Calculus II	2	MATH101	20	80	Dr O Selsil
MATH103	Introduction to Linear Algebra	1	A level mathematics or equivalent.	20	80	Prof V Goryunov
MATH122	Dynamic Modelling	2	MATH101 MATH103	20	80	Dr B Vasiev
MATH142	Numbers, Groups and Codes	2	-	20	80	Dr J Haddley

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Code	Title	Semester	Pre-requisites	% CA	% Exam	Lecturer
MATH162	Introduction to Statistics	2	-	20	80	Dr B N Vasiev
<b>Level 5</b>						
MATH201	Ordinary Differential Equations	1	MATH101-3	10	90	Prof K Chen
MATH206	Group Project Module	2	-	100	0	Prof K Chen
MATH224	Introduction to the Methods of Applied Mathematics	2	MATH101-3	10	90	Dr T Teubner
MATH225	Vector Calculus with Applications in Fluid Mechanics	1	MATH102	15	85	Prof A Movchan
MATH227	Mathematical Models: Microeconomics & Population Dynamics	1	MATH101-3	10	90	Dr D Lewis
MATH228	Classical Mechanics	2	MATH101-3 MATH122	10	90	Prof J Gracey
MATH241	Metric Spaces and Calculus	1	MATH101-3	10	90	Dr N Pagani
MATH243	Complex Functions	1	MATH101-3	20	80	Dr A Pratussevitch
MATH244	Linear Algebra and Geometry	1	MATH101-3	10	90	Prof L Rempe-Gillen
MATH247	Commutative Algebra	2	MATH101-3	10	90	Prof A Pukhilov
MATH248	Geometry of Curves	2	MATH101-3	10	90	Dr O Karpenkov
MATH261	Introduction to Methods of Operational Research	1	MATH101-3	10	90	Dr R Nair
MATH263	Statistical Theory and Methods 1	2	MATH101-3 MATH162	15	85	Dr K Sharkey
MATH264	Statistical Theory and Methods II	2	MATH101 MATH103 MATH162	10	90	Dr R Tatar
MATH266	Numerical Methods	2	MATH101-3	10	90	Dr I Thompson
MATH322	Chaos and Dynamical Systems	1	MATH101 MATH103	0	100	Dr B Vasiev
MATH323	Further Methods of Applied Mathematics	1	MATH101-3 MATH224	0	100	Prof D I Jack
MATH324	Cartesian Tensors and Mathematical Models of Solids and Viscous Fluids	1	MATH101-3	0	100	Prof N Movchan
MATH325	Quantum Mechanics	1	MATH101-3, MATH122; MATH201 or MATH224	0	100	Prof J Gracey

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Code	Title	Semester	Pre-requisites	% CA	% Exam	Lecturer
MATH326	Relativity	2	MATH101-3 MATH122 MATH228	0	100	Dr T Mohaupt
MATH331	Mathematical Economics	2	MATH101-3 MATH227 preferred	0	100	Dr D Lewis
MATH332	Population Dynamics	1	MATH101-3, MATH201	0	100	Dr K Sharkey
MATH342	Number Theory	2	MATH101 MATH103; MATH142 or MATH343	0	100	Dr T Hall
MATH343	Group Theory	1	MATH101 MATH103; MATH142 or MATH244 or MATH247 helpful	10	90	Prof Pukhilov
MATH344	Combinatorics	1	MATH101-3	10	90	Dr V Guletskii
MATH349	Differential Geometry	2	MATH101-3, MATH248 recommended	15	85	Dr O Karpenkov
MATH351	Analysis and Number Theory	1	MATH101-3; MATH241 helpful	0	100	Dr R Nair
MATH361	Theory of Statistical Inference	2	MATH263 and preferably MATH264	10	90	Dr Y Zhang
MATH362	Applied Probability	1	MATH264	0	100	Dr K Liu
MATH363	Linear Statistical Models	1	MATH263	10	90	Dr K Zychaluk
MATH364	Medical Statistics	2	-	0	100	Dr S Lane
MATH366	Mathematical Risk Theory	2	MATH264	0	100	Dr A Papaioannou
MATH367	Networks in Theory and Practice	1	2 <sup>nd</sup> Yr Maths	0	100	Dr A Pantelous

## Section 4 – Study

Students are taught either in lectures, tutorials or practicals, and study for each year will be divided into modules totalling 120 credits over two semesters. In this Department, most undergraduate modules are worth 15 credits, although some second year modules are worth 7.5 credits and the final year project modules are worth 30 credits.

During the normal teaching weeks total study time is expected to be about forty hours per week, i.e. ten hours per week for each 15 credit module. For example, COMP101 has three lecture hours per week plus a one hour supervised practical class and a one hour tutorial. In addition, students will need to spend time finishing practical exercises, studying their lecture notes, background reading and working on the practical assignments set as part of the assessment of the module. A significant amount of time, therefore, needs to be spent on private study.

### 4.1 Computer Science Departmental Learning, Teaching and Assessment Strategy

The aims of the Department in its teaching are to provide you with:

- an understanding of the basic principles of Computer Science, the current state of knowledge of the subject, and its application to the processing of information in all aspects of life and work;
- transferable skills to assist you to take up employment and to equip you throughout your subsequent working life;
- a stimulating, supportive and well-equipped environment which will help you to maximise the benefits and achievements which you can gain from your studies.

In addressing these aims, the Department's undergraduate programmes all include a significant amount of material on the theory, design and implementation of computer systems while at the same time focusing on their individual specialist areas. By the end of your selected programme, it is expected that you will:

- be able to demonstrate good practice and effective skills in the analysis of problems, and in the design and implementation of software;
- have a broad understanding of the subject of Computer Science, including state-of-the-art knowledge in selected areas (depending on the nature of the selected programme);
- have experience and skills in the oral and written presentation of results and reports;
- have an appreciation of the professional, ethical and moral issues relating to your subject;
- be able to undertake individual programmes of study involving the acquisition, assessment and application of knowledge.

With regard to its programmes, the Department considers it important to maintain a proper balance between academic and vocational aspects. In this respect our aims are:

- to give you a wide ranging academic view of the basic foundations of the subject. This will provide a firm foundation from which to judge future new developments that you may meet in a career in the subject;
- to provide skills in the use of many of the current computer systems and languages that will be immediately useful when you leave the University.

We believe that all our degree programmes will provide you with skills that can be used immediately in industry and commerce, as well as providing the broader view which is needed to deal with issues arising from advances in technology, in management and in high level research.

Full details of the departmental strategy may be found at:

<http://intranet.csc.liv.ac.uk/department/ltas/>. Details of the assessment method for each module can be found in the appendix relating to your programme.

## 4.2 Teaching and Learning

Modules will use an appropriate mix of teaching methods as indicated below. For a 'taught' module the total notional hours of teaching and learning, as indicated by the credit value of the module, will typically consist of 20-25% lectures, 10% scheduled practicals or tutorials, and 65-70% private study and assessment.

- **Lectures**

The majority of modules are taught using 50-minute lectures which typically involve the whole cohort of a module. Lectures are intended to disseminate knowledge, concepts, ideas, background information, methods and skills and can also include elements of demonstration of processes, methods, and tools. They aim to promote reflection on your part and to stimulate wider learning beyond their specific content, and can also be developed further by private study, practicals, tutorials, and projects.

The style of presentation of lectures varies from module to module. As of 2017/18, some lecturers will distribute handouts, which might be summaries, diagrams, rough notes or condensed manuals on a language or other computer facility. **These handouts, however, will be supplementary to any material contained in the module textbook or presented during lectures and it will still be necessary to take notes during the lectures.**

It is essential that you keep up with the material given in lectures and do not allow a backlog of work to build up. You should make sure that you have a complete and fully understandable set of lecture notes by making clear notes during all the lectures. If notes are distributed in printed or electronic form, you will need to go over them and rewrite parts in your own words in order to fully understand them.

Obviously you must understand your notes, and the process of sorting them out should clarify the information and ideas they are intended to convey; those for some of the lectures will need rather a lot of work while others will need very little. The notes may need to be expanded to a greater or lesser degree, using material from the module textbook and other sources (e.g. the library).

There will be two important consequences of this approach. Firstly, when the time comes round to revise, the notes will already be sorted out and it will not be necessary to spend valuable time doing this. Secondly, this is a task with a defined end point, in that you will know when you have finished dealing with a topic and can then go on to do other things.

If you have difficulty understanding any aspect of work and the textbooks do not help, you should not hesitate to ask either the module co-ordinator or a demonstrator for help. You

should not be afraid to ask questions during or after lectures, tutorials, practicals or at other times. Many students experience difficulty with their work at some stage, so you need not be afraid that you will be alone in needing extra help to understand parts of the programme.

It is **very important** not to fall behind in any module, as the time available for catching up is very short.

- **Practicals/Labs**

Practical and/or lab-based elements are central to ensuring that you acquire the key skills fundamental to your chosen programme of study. All practicals are linked to specific modules and are intended to enable you to acquire the practical abilities and skills that the module aims to imbue.

The topic of each practical is determined by the module co-ordinator responsible. All scheduled practicals take place during timetabled sessions indicated in your individual timetable or by alternative arrangements as advised by the module co-ordinator. These are typically held in one of the specialised labs provided by the Department and will last 50 or 100 minutes.

Scheduled practicals are supervised by demonstrators or by the module co-ordinator. Just as in lectures, you should not hesitate to ask questions or ask for help during a practical.

- **Tutorials and On-line Discussion Groups**

Tutorials, usually delivered in smaller groups than lectures, provide an opportunity for you to get more individual help and attention from academic staff or appropriately trained postgraduate demonstrators. All tutorials are centred around exercises that relate to material taught in lectures or to a continuous assessment task of a specific module, and the topic of each tutorial is determined by the module co-ordinator responsible for the tutorial. Tutorials take place during timetabled sessions indicated in the individual timetables of students or by alternative arrangements as advised by the module co-ordinator. Each tutorial typically lasts 50 minutes.

If the exercises for a tutorial are made available in advance, then you will either be instructed to familiarise yourself with the exercises and, in some cases, attempt to solve them before the tutorial. You should use part of your private study time to do this, as only by doing so will you take full advantage of the tutorials.

On-line discussion groups are a variation of tutorials where interchanges between students and staff or demonstrators take place on-line in a Virtual Learning Environment. Like tutorials they can be centred around specific exercises or may provide another means by which students can have open-ended discussions related to the content of a specific module.

- **Group and Individual Projects**

At various stages throughout the programme you will undertake group and/or individual projects. Group projects are intended to emphasise student-directed learning as well as to enhance your ability to work collaboratively. The individual project or projects that you undertake are key elements in which student-directed initiative plays a part and provides a valuable opportunity for you to enhance presentation skills.

- **Placements**

Programmes may include placement elements where you undertake work at or with an organisation outside the University. Placements aim to provide the opportunity for you to experience the 'world of work', to develop a range of employability skills and to allow you to reflect upon your placement learning in the context of your possible future career. There is also an opportunity for placements abroad.

- **Private Study**

Private study includes

- the preparation for a formal teaching session (lecture, practical, tutorial, project meeting);
- reflection and consideration of the content of the formal teaching session and related teaching material;
- wider background reading and learning;
- the practice of particular skills, methods, and processes (using the Department's laboratory equipment outside scheduled practicals or equipment equivalent to that provided);
- completion of assessment tasks and revision for examinations.

The Student Common Room on the second floor of the George Holt Building (room H216) is available for private study. The Department also has two meeting rooms in the Ashton Building (rooms 101 and 208) which are available for project related activity including group project meetings as well as group study. See also [Section 6.2.2](#).

### 4.3 Commitment to Studies

The elements of learning and teaching within the Department have been detailed above, but however good the teaching, a major effort is required from you in order for you to be successful on your degree programme.

You yourself are responsible for keeping abreast of your programme of study. If you have any problems understanding sections of work, either in connection with lectures or with practical work, then you should seek help immediately from the module co-ordinator or your Academic Advisor. If you do not seek such help we will naturally assume, in the absence of evidence to the contrary, that you are not having any problems. When you do seek help we will do our best, with your co-operation, to help.

### 4.4 Monitoring Students' Commitment to Study

You are expected to attend all lectures regularly, and attendance below 60% will be regarded as unsatisfactory (except where there are extenuating circumstances). Attendance at practical classes is even more important and a full attendance record at them is expected. **EVERY piece of assessed work must be submitted.** For some modules, e.g. COMP101, failure to submit a single piece of assessed work will lead to a failing mark in that module.

#### 4.4.1 Departmental Procedure for Monitoring Attendance

Attendance at classes is crucial to the successful completion of coursework and examinations, and those are in turn central to your progress from one year to the next. The great majority of our

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students play a full part in their degree study and gain enormously from it. Unfortunately, we need to have procedures in place for the small minority who choose not to engage with their work here. Attendance at classes and the punctual submission of coursework are key factors in determining whether your progress is satisfactory. Absences are monitored closely by the School. Academic staff will inform the Academic Lead for Student Progress if you are negligent in attendance or submission of work and you may receive a written warning. A student who ignores such a warning and continues to be negligent may be referred to a Departmental Progress Panel which acts on behalf of the Board of Examiners and can recommend that your studies be terminated.

When, in your final year or after graduation, you apply for employment or further study, you will need a reference. Employers and educational bodies invariably request details of attendance and timekeeping. Consistent commitment to work and conscientious attendance throughout your degree studies will therefore have an impact on your future career.

The modules in the Department introduce many new skills and often quite detailed and subtle concepts. Since there is only one week set aside for revision, you need to keep up with your lecture material and coursework. It is therefore very important not to miss any lectures, tutorials, practicals or lab sessions.

Absence from lectures is often a sign that a student is having either academic or personal problems. We therefore monitor attendance to identify problem cases. Moreover, failure to attend regularly may lead to serious problems for international students.

You will be asked to scan your student ID card at the start of lectures to register your attendance. You should, therefore, ensure that you carry your card (and no other students') with you when attending a lecture or using the computer labs for scheduled practicals. If you forget your card in the first four weeks of the semester, the lecturer will have a temporary register for you to sign.

If you go to a lecture but for some reason do not register your attendance, you should advise the Student Office as soon as possible. If a lecture is missed for good reason (e.g. illness, family circumstances, medical appointment) you should complete an absence form and hand this in to the Student Office ([see Section 4.5](#)). Your attendance record will then be amended accordingly.

If your attendance fails to meet the required standard, you will receive communication as follows:

- An e-mail will be sent asking you to attend an interview with your Academic Advisor to discuss the reasons for your poor attendance;
- If you fail to attend this interview, or if your attendance does not improve, a letter will be sent to both your term time and permanent addresses, requesting you to attend an interview with the Chair of the Board of Studies;
- Failure to attend the interview with the Chair of the Board of Studies will result in a departmental warning letter. This will be copied to Faculty, which has the power to require withdrawal from study.

**Please note that student ID cards should never be scanned on behalf of anyone else.** The Department takes this matter very seriously and anyone who is suspected of falsifying attendance records will be required to attend an interview with the Chair of the Board of Studies or an appointed panel, and may subsequently be reported to University level disciplinary boards.



#### 4.4.2 Reference Letter Support Tool

The Department of Computer Science is pleased to support students' applications for further study and to assist with this, a system is in place to help with the production and management of reference letters. All year 2 and 3 students who wish to request a reference letter from a member of staff **MUST** use the online reference letter tool to make this request requests will not be accepted by email (<https://sam.csc.liv.ac.uk/COMP/ReferencesHelp.pl>).

The first person a reference letter should be requested from is the student's Academic Advisor. A second letter may be requested from the student's final year project supervisor. In exceptional cases where a third reference is required for an application, the student may approach one of his/her lecturers to request (via the online tool) this letter in support of only the application that requires the third letter.

The Department has a policy of each Academic Advisor and final year project supervisor producing up to a maximum of five reference letters per student. Advice can be sought from Academic Advisors on which institutes are the most appropriate to target for individuals' postgraduate applications. Once reference letters have been provided to students, they will be asked to report to the Department which applications have been successful and any offers taken up by students. This will assist with the provision of advice to students in future years. Instructions on how to request a reference letter are provided within the tool.

#### 4.5 Absence from Studies and Claims for Extenuating Circumstances

It is important that you notify the Department of any absence from your studies by completing the appropriate form/s. These are available either from the Student Office or the departmental website and should be completed as follows:

- Absence from lectures.  
<http://intranet.csc.liv.ac.uk/department/ltas/AbsenceForm.pdf>  
You should complete this form if you know that you will miss, or if you have missed, a lecture, practical or tutorial. If the absence is for a good reason, your attendance record will be modified to show an excused absence and this will not be taken into consideration when reviewing absences. The form will be copied to your Academic Advisor for information.
- Extenuating circumstances (late submission or affected/missed coursework)  
[http://intranet.csc.liv.ac.uk/student/forms/Extenuating\\_Circumstances\\_Coursework.pdf](http://intranet.csc.liv.ac.uk/student/forms/Extenuating_Circumstances_Coursework.pdf)  
You should complete this form, in addition to the absence form, if a coursework deadline or class test is affected. The form will be passed to the module coordinator who will decide on an appropriate action. You should also contact the module coordinator directly to see whether an extension is possible. See also [Section 5.1.4](#)
- Extenuating circumstances (including Examinations or on-going circumstances)  
[http://intranet.csc.liv.ac.uk/student/forms/Extenuating\\_Circumstances.pdf](http://intranet.csc.liv.ac.uk/student/forms/Extenuating_Circumstances.pdf)  
You should complete this form if your overall performance or an exam has been affected. This form will be copied to your Academic Advisor and will be considered by the Extenuating Circumstances Committee which meets shortly before the meetings of the Board of Examiners in February, June and September. You will be advised in writing of the decision of the Committee shortly after the exam results are released.

All forms should be submitted to the Student Office as soon as possible. In the case of extenuating circumstances you will be notified by e-mail of the final date for submitting claims following the written examinations in January, May and August.

#### 4.6 Departmental Progress Panel

Students who make insufficient progress in their studies may be asked to attend an interview with the Departmental Progress Committee. This comprises of the Chair of the Board of Studies, the Director of Studies for the relevant programme and the Examinations Officer. This interview is intended to identify and recommend an appropriate course of action for the student to follow before it becomes necessary to rule that progress is unsatisfactory.

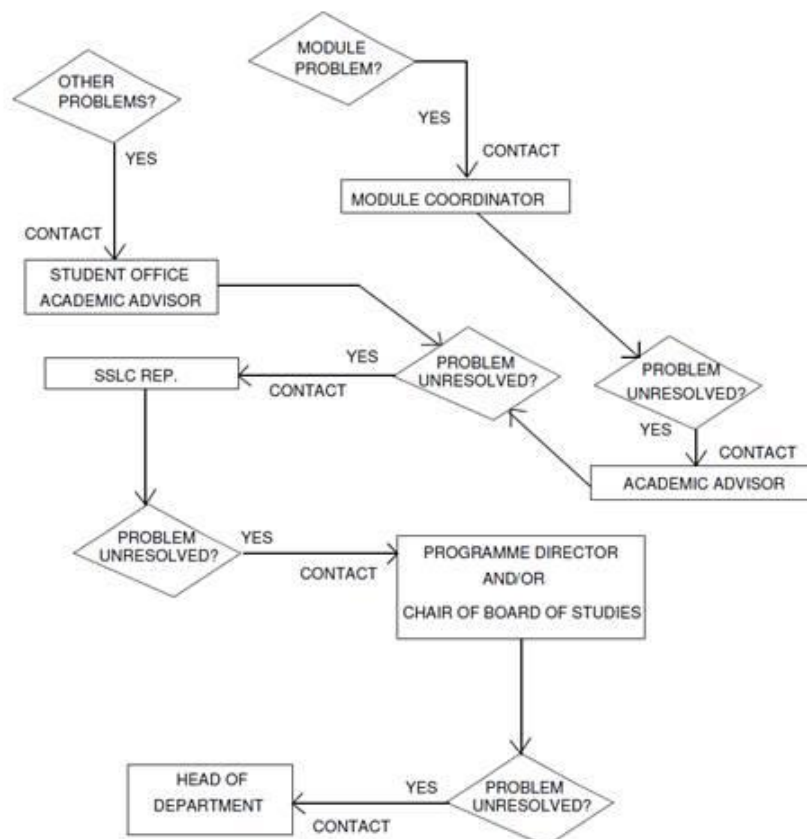
#### 4.7 Complaints Procedure

##### Whom to contact if something concerns you

It is recognised that, on occasion, situations may occur in the course of module delivery which you feel concerned about: this may be anything from disquiet about demonstrators, an assessment you have received, aspects of the module itself, to more serious issues such as the outcome of Board of Examiners meetings and their consequences on progression into the next year of study.

We would hope it is recognised that the Department takes such concern seriously and is perfectly happy to consider and advise on any issues that arise. Nevertheless, in addressing and dealing with specific issues it is far more likely that a successful resolution of problems will be achieved if the appropriate pathway of responsible individuals have been made aware of the problem.

The flowchart below presents the route that ought to be followed.



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Please note that there is no point in raising an issue (no matter how serious it may appear to you) directly with, for example the Chair of the Board of Studies in Computer Science (let alone with the Head of Department) unless the matter in question has already been considered by responsible parties at an earlier stage and you do not consider the matter to be resolved.

It is not that these individuals are reluctant to become involved, it is more the case that: firstly, you will only increase the length of time taken to deal with the issue of concern (if a problem is raised immediately with the Head of Department with no record of it having been discussed earlier, this will only result in it being referred through proper channels not with its solution being expedited); secondly, going directly to the most senior individual without consulting others creates an impression of at best frivolous time-wasting and, at worst, of malicious disregard for procedures. By following these procedures staff will be able to work with you in an efficient manner to address any such issues that arise and, it is hoped, reach a mutually acceptable conclusion.

## Section 5 - Assessment

### 5.1 Assessment in the Department of Computer Science

#### 5.1.1 Types of assessment

There are a wide variety of ways that different modules are assessed, the method(s) being chosen to suit the material and aims of each particular module. For Computer Science modules, these are:

- **Written examinations**

An examination is an assessment task formally scheduled and supervised by the University which takes place over a specified period, in a specified location and at a specified time.

For examinations on modules in the remit of the Board of Studies in Computer Science students provide written answers to a set of questions. This includes written examinations that may in part or solely consist of multiple choice questions. Where the assessment of a module includes a written examination, this will take place at the end of the semester or semesters in which a module is taught. The duration of examinations varies between 1 and 2.5 hours.

- **Practical assessments**

Practical assessments include the assessment of tasks performed in laboratories as well as the assessment of written reports, oral presentations, or demonstrations of the outcome of work conducted in laboratories (or using equipment equivalent to that provided in laboratories), often in relation to an assignment set for a module.

- **Class tests**

A class test is an assessment task scheduled by the module co-ordinator with a typical duration of 50 minutes. The format of class tests is identical to that of examinations.

On-line tests are an alternative form of class test. An on-line test might be time-limited, that is students have only a certain amount of time to complete the test and there will either be a specific date and time on which the test takes place, or there will be a deadline by which students must complete the test.

- **Placement reports, project reports and dissertations**

Placements and projects typically involve an element of assessment by a final report or dissertation due at the end of the placement or project. Such reports and dissertations on a module in the remit of the Board of Studies in Computer Science will typically be practical assessments, that is, be based on laboratory or laboratory-related work. However, dissertations based on purely theoretical work are possible at FHEQ level 7 (former UoL level M).

- **Other types of coursework**

This includes presentations, demonstrations of software, essays, or the completion of small assessed tasks during, or in advance of, a tutorial.

Modules will use an appropriate mix of these types of assessment, varying from 100% assessment by written examination to 100% assessment by continuous assessment (practical assessments, class tests, reports, essays, presentations are particular forms of 'continuous assessment'). An example of the latter is the module COMP101 on which students are required to write a short program each week. Each of these programs must be handed in for assessment by a given deadline. Similarly, on COMP107 students have to write essays, give a presentation and complete other practical assessments. For COMP101, a reasonable attempt must be made for each assessment in order to pass the module.

It should be noted that assessments of a module are not restricted to the assessment of material and skills covered in lectures, tutorials, and practicals but can extend to material and skills that can be expected to have been acquired through private study.

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### **5.1.2 Practical assessments, projects and other types of coursework**

Nearly all the practical work that is done for a practical assessment, project or other type of coursework involves the use of the Department's computer systems.

On some modules, the scheduled practicals in your timetable are intended to give you time in one of the laboratories to work on a practical assignment under the supervision of a demonstrator. In order to make the best use of this time, you should have given some thought to the solution of the assignment beforehand. This will probably involve familiarising yourself with any relevant handouts and lecture notes on the topic. You will also need to have planned out how to tackle the problem.

If the assignment is concerned with the design and implementation of a program, database, website, or other computer software, a draft solution should be prepared in advance of the practical class. This can be taken along, ready to be typed into or uploaded onto the computer, or be made available beforehand. If you have not been able to do that, then you should at least have a list of questions about the work to ask the demonstrator.

Without this preliminary preparation you will not be able to make use of help that the practical class demonstrator can provide, but will spend the time reading and understanding the assignment, being ready to ask questions only at the end of the session. This is obviously not an optimal use of the time.

Even if scheduled practicals are dedicated to exercises other than practical assignments, they still provide an opportunity to ask questions not only about those exercises but also about practical assignments.

You should try to make the maximum use of the help available during scheduled practicals. Do not hesitate to ask the demonstrators and module co-ordinator questions; that is what they are there for. However, there will be a limit to what they will be able to do for you, as it is not the job of a demonstrator or module co-ordinator to solve assignments for you.

In addition to supervised practical sessions, most assignments will involve additional unsupervised work using the computers in order to prepare or complete a solution and to write reports.

It is also possible to obtain assistance and advice on general programming problems from the departmental **Helpdesk**. However, the technical support staff are typically not familiar with the detailed contents of individual modules, so may not be able to assist with specialised queries. Such issues should be directed to the module co-ordinator and/or demonstrators.

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### **5.1.3 Submission of Work**

In any module where set work is part of the assessment, you will be notified in advance of:

- The deadlines for the assessed work.
- Where, when and how the work must be submitted.

An overview of coursework deadlines can also be found on the departmental database at <https://sam.csc.liv.ac.uk/COMP/> See also [Section 1.4](#)

If this information is not provided, then you should not hesitate to ask for it. Some modules have specific requirements with regard to the format and length of the submitted work. If this is the case, you will be notified in advance and you should ensure that you adhere to these requirements, as there may be penalties if you do not.

There is a standard University Policy imposing penalties for late submission, which is applied by the Department. See Section 6.2.1 of the Code of Practice on Assessment at: [http://www.liv.ac.uk/media/livacuk/tqsd/code-of-practice-on-assessment/code\\_of\\_practice\\_on\\_assessment.pdf](http://www.liv.ac.uk/media/livacuk/tqsd/code-of-practice-on-assessment/code_of_practice_on_assessment.pdf)

We may make and authorise third parties to make copies of any work submitted by you for assessment but only for the following purposes:

- Assessment of a student's work;
- Comparison with databases of earlier answers or works or other previously available works to confirm there is no plagiarism; and
- Addition to databases of works used to ensure that future works submitted at this institution and others are not plagiarised from a student's work.
- Review by accrediting bodies, external examiners, University QAA and other external bodies as appropriate.

Feedback on assessment tasks will be provided following the Policy on Feedback to Students (see [Section 5.4](#)). You can appeal against the results of an assessment task, examination, or decisions by the Board of Examiners following the University's Assessment Appeals Procedure. See Appendix F of the Code of Practice on Assessment at: [http://www.liv.ac.uk/media/livacuk/tqsd/code-of-practice-on-assessment/appendix\\_F\\_cop\\_assess.pdf](http://www.liv.ac.uk/media/livacuk/tqsd/code-of-practice-on-assessment/appendix_F_cop_assess.pdf)

Please also see [Section 4.7](#) with details about whom to contact if something concerns you.

#### 5.1.4 Procedure for Requesting an Extension/Missed Class Test

If you have a valid reason for being unable to submit coursework on time or for missing a class test, you should complete the form 'Extenuating Circumstances Affecting Coursework'. The form can be collected from the Student Office or downloaded from

[http://intranet.csc.liv.ac.uk/student/forms/Extenuating\\_Circumstances\\_Coursework.pdf](http://intranet.csc.liv.ac.uk/student/forms/Extenuating_Circumstances_Coursework.pdf)

Once completed, the form should be submitted to the Student Office together with any supporting evidence. You should also contact the module co-ordinator responsible for the assessment, preferably before the deadline for the submission of such work or date of class test, otherwise as soon as possible afterwards.

The module co-ordinator is empowered, if appropriate, to offer an extension of the deadline for practical assignments/project work to allow the piece of work to be completed. Where coursework or class tests missed count for no more than 20% of the module mark and it is possible for you to demonstrate the achievement of the learning outcomes of the module through other assessments, it is also possible for the module co-ordinator to excuse you from the missed coursework or class tests and to compute the module mark on the basis of the remaining assessments. Note that the decision rests with the module co-ordinator.

If you are excused from a missed class test or coursework, the overall module mark is based on unaffected assignments, that is, the final mark will be calculated using the following formula:

$$\text{Total Mark} = \frac{\text{MC1} * \text{W1} + \text{MC2} * \text{W2} + \text{MC3} * \text{W3} + \dots}{\text{W1} + \text{W2} + \text{W3} + \dots}$$

Where MC1, MC2, ... are the marks of the assessments (i.e. class tests, exams, coursework) from which you have not been excused and W1, W2, ... are the weights of the assessments from which you have not been excused.

## 5.2 Marking Descriptors

Marking on FHEQ level 4, 5, and 6 modules offered by the Department of Computer Science is carried out using the following marking descriptors:

	<b>For practical exercises and projects</b>	<b>For exercises, presentations, projects, and written examinations:</b>
90-100%	Displays an <i>exceptional</i> degree of originality and creativity and/or <i>exceptional</i> analytical and problem solving skills. Solution must have novel aspects. The methodology employed is well-developed and correct.	Shows <i>critical</i> understanding of current knowledge. For level 6 this should include relevant recent research papers. Perceptive, focused treatment of all issues/questions presented in a critical and scholarly way.
80-89%	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.	Evidence of wide reading. For level 6 this should include relevant research papers and books. Perceptive, focused treatment of all issues/questions presented in a critical and scholarly way.

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	<b>For practical exercises and projects</b>	<b>For exercises, presentations, projects, and written examinations:</b>
70-79%	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.	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%	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.	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%	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.	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%	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.	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%	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.	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%	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.	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



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	<b>For practical exercises and projects</b>	<b>For exercises, presentations, projects, and written examinations:</b>
		and omissions and the evidence provided to support arguments is very limited.
20-29%	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.	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%	Little evidence of the use of a suitable methodology.	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%	No evidence of the use of a suitable methodology.	Virtually devoid of any evidence of knowledge or understanding of the subject. No or almost no arguments/answers.

### 5.3 Assessment in Other Departments

It is not possible here to provide information on the methods of assessment which apply to modules offered by other departments, especially those in other faculties. However, staff are required to inform students of the precise method of assessment at the beginning of each module.

If this has been overlooked you should ask the module coordinator to provide information on the method of assessment. Some modules can be assessed by methods which are not obvious, so it is important to get this information. For instance, in some cases, missing continuous assessment exercises or class tests, or a poor performance in the continuous assessment element of a programme, can result in a large penalty being imposed.

### 5.4 Feedback

The purpose of feedback is to facilitate improvement and promote learning. This covers both academic content and formal aspects of work submitted for assessment. Information regarding the aims, learning outcomes, teaching and learning strategy, syllabus and method of assessment for each module are available on the departmental website, and further information will be provided by the lecturer concerned.

**Continuously assessed work:** Feedback may take many forms - written, recorded, oral or peer feedback or self-assessment, and may include numerical marks, grades, and/or qualitative points

and comments. There will normally be publicised marking descriptors for numeric or grade-based marking.

The aim would always be to provide feedback as quickly as is practicable (normally within 15 working days of the submission deadline) and ideally before the next related assessment task (or final examination). However this may not always be possible, depending on the size of the class, and the timescales involved.

**Examinations.** Examination scripts are not normally returned to students. If students require individual formative feedback on examination performance, they can request this by contacting the Student Office within two weeks of the release of the exam results. In addition, examiners will, wherever possible, provide generic group feedback to students on their performance in examinations. This generic group feedback can be found at <http://www2.csc.liv.ac.uk/examfeedback/> once the exam results have been made available.

Academic advisors can be consulted regarding feedback on your overall academic performance.

The Feedback Policy for modules in the remit of the Board of Studies in Computer Science can be seen at [http://intranet.csc.liv.ac.uk/department/ltas/BSCS\\_Feedback\\_Policy.pdf](http://intranet.csc.liv.ac.uk/department/ltas/BSCS_Feedback_Policy.pdf)

## 5.5 Departmental Prizes/Scholarships

In 2017/18 the following prizes are expected to be available:

- the O'Reilly Academic Prize for the best performance on COMP201 Software Engineering
- the Andrew Young Prize for excellent performance
- the Athena Swan Prize for contributions to promote increased participation of women in Computing
- the Department of Computer Science Prize for excellent performance in the final year of study
- the Department of Computer Science Project Prize for the best final year project

## Section 6 - Departmental Resources and Support for Students

### 6.1 Help and Advice

If you are having problems or need advice, there are a number of people who can help you:

#### 6.1.1 Academic Advisor

Your Academic Advisor is the first port of call if you are having problems with your academic studies or if you are having any personal difficulties. If you have any problems contacting your Academic Advisor, the Student Office will be able to help you. Every student has an Academic Advisor who provides appropriate support to help students fulfil their academic potential during the course of their studies. You can find the name of your Academic Advisor via Liverpool Life. Your Academic Advisor will meet you when you begin your studies in the Department and you can make appointments to meet with him or her throughout the course of your programme to discuss your

progress. Your Academic Advisor will write your reference for employment/further study in your final year, so it is essential that you enable him or her to get to know you over the course of your studies by arranging to meet regularly.

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### **6.1.2 Student Experience Team**

The Student Experience Team is primarily located in the Student Office in room G09 on the ground floor of the Ashton Building. You can contact the Student Office for general advice and assistance, reporting of absence and submission of medical notes. The office is open daily from 9:15-16:45, except Wednesdays when it is open 9:15-14:00. You are welcome to call in at any time during opening hours. The office also remains open during vacations.

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### **6.1.3 Student Experience Co-ordinator and Team Leader**

Mrs Judith Birtall (Student Experience Co-ordinator) and Mrs Jan Harding (Student Experience Team Leader) can help with advice on school level procedures and signposting to central and specialised support services. They also act as Secretary to the Board of Examiners. Mrs Birtall is located in the Computer Science Student Office, room G09 and Mrs Harding is located within the Department of Electronics and Electrical Engineering; for contact details, please see [Section 2.2](#).

Both Mrs Judith Birtall and Mrs Jan Harding can help if you are experiencing serious difficulties with any aspect of University life. They will be able to provide advice and support with welfare and pastoral concerns, ensuring that you are guided to the most appropriate specialised support for your needs. Please contact the Student Office in the first instance, if you wish to make an appointment ([csstudy@liv.ac.uk](mailto:csstudy@liv.ac.uk)).

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### **6.1.4 Technical Staff**

The technical staff can be contacted via the Helpdesk and can offer advice and support for any matters relating to the departmental computer system. See [Section 6.3.2](#) below.

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### **6.1.5 Senior Tutor**

Dr David Jackson ([Djackson@liverpool.ac.uk](mailto:Djackson@liverpool.ac.uk)) acts as Senior Tutor and can advise students on how to appeal against decisions made by Progress Committees.

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### **6.1.6 Peer Mentor**

Your peer mentor is a current student who has experience of the Department and the University and can help you settle into University life. If you have any difficulties contacting him/her, please contact the Student Office.

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### **6.1.7 Departmental Disability Officer**

Mr Phil Jimmieson ([phil@liverpool.ac.uk](mailto:phil@liverpool.ac.uk)) can provide advice if you have a disability and need any support. For further information please visit the Disability Advice and Guidance page <https://www.liverpool.ac.uk/studentsupport/disability/>

## **6.2 Study Facilities**

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### **6.2.1 Student Common Room and Private Study Area**

Room H211/H212 of the George Holt Building has been designated the student common room and private study area. This room contains vending machines dispensing cold drinks and snacks, lockers

for the storage of small items (e.g. laptops & books) and is open during normal working hours. Lockers are allocated on a first come, first served basis - students wishing to rent a locker should see the staff on Helpdesk for further details.

This room also has Wi-Fi provision allowing you to gain access to the internet from your laptop.

**You are permitted to eat and drink in this room** and use it for social gatherings. You are responsible for keeping this area tidy by disposing of rubbish in the bins provided.

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### 6.2.2 Meeting Rooms

The Department has two meeting rooms in the Ashton Building (rooms 101 and 208) which are available for project related activity including group project meetings as well as group study. An electronic booking system is used which allows students to check the availability of a room and request hourly slots electronically. The Student Office will approve or decline the request and you will receive an automated e-mail to inform you of the decision. The electronic room booking system is available via the Computer Science portal at [https://cgi.csc.liv.ac.uk/~paddy/portal\\_new/login.php](https://cgi.csc.liv.ac.uk/~paddy/portal_new/login.php)

## 6.3 Computing Facilities

The Department has around 300 computer workstations and servers, all networked together and connected to the wider University network and the global Internet. The facilities provide a full range of Microsoft Windows, Linux, and Apple Macintosh computing environments, as well as a selection of departmental network services. All of these are available exclusively to staff and students attending Computer Science modules, and are in addition to the University-wide computing facilities provided by the Computing Services Department.

Most of the workstations provided for student use are PCs running the Windows 10 operating system. These also provide networked access to a set of workstations running Scientific Linux, which can be used either via a command-line-based terminal session, or a full graphical desktop environment. There is also a laboratory of 30 Apple iMacs running Mac OS X.

All systems, independent of the operating system used, share a common unified file system for individual users' documents, programs, etc. Each user has their own data, which only they can access. These user files are backed up daily, to provide protection against accidental loss.

You also have access to the use of the University printing facilities, allowing output to be retrieved from anywhere across the campus.

Other network services provided automatically to all members of the Department include remote access to the departmental Linux systems and common file system, departmental and personal web-based information (including dynamically generated pages), and electronic mail via the main University email service. Other services available on request include database facilities (MySQL & Oracle), and collaborative management of source code and other documents (CVS or Subversion). Students and staff also have access to the full range of University facilities provided by the Computing Services Department.

Use of Computer Science facilities is restricted to students attending programmes or modules provided by the Department of Computer Science. The access is controlled by means of a username and password, which will typically be assigned during the initial registration period. Note that most Computer Science facilities are administered separately from the CSD-maintained systems, and the Computer Science username and password will be different from those used to access University-wide services. Similarly the departmental file store is distinct from the corresponding University facilities.

Starting in 2016-17, laboratory one, contains similar systems to PC labs elsewhere in the University, but, configured to meet Computer Science teaching requirements. This laboratory uses the same username and password as the other University wide services. This provision may be extended to the other labs in due course.

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### **6.3.1 Student Laboratories**

There are four teaching laboratories located on the first floor of the George Holt Building dedicated for student use. These contain 150 systems running Windows 10 and 30 Apple iMacs. In general, unless a given laboratory is booked for a scheduled class, the systems will be available for use by any student for working on practical assignments, private study or other activities relating to the degree programme. These laboratories will normally be open between 8:30 and 17:30, Monday to Friday during term time. Some of these labs may be closed for maintenance outside term time, but there would still be access to departmental computing facilities during normal working hours.

Faults with equipment or software should be reported to the technical support staff, so that they can be attended to promptly. You should not attempt to interfere with or move equipment. The laboratories are protected with motion sensors and CCTV cameras, and moving equipment may cause an alarm to be triggered.

You are asked to assist in keeping the computer labs tidy and pleasant to work in, by disposing of waste paper and other rubbish in the bins provided. **Food and drink may not be taken into the computer laboratories.**

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### **6.3.2 Helpdesk**

The first point of contact for issues relating to the departmental computing facilities should be the Helpdesk, which is situated on the second floor of the George Holt Building, in room H225. This is open during term time between 10:30-12:30 and 14:00-15:30, Monday to Friday (except Wednesday afternoon). Outside term time, you should contact a member of the technical staff directly.

The Helpdesk should be used to report problems with equipment or software packages. It may also be able to offer advice with general programming problems. However the technical support staff are typically not familiar with the detailed contents of individual modules, so may not be able to assist with more specialised queries. Such issues should be directed to the relevant module coordinator and/or demonstrators. Similarly, questions about the organisation or structure of the degree programme should be directed your academic advisor or the Student Office in the first instance.

Note that this Helpdesk is purely concerned with the Computer Science departmental equipment. Issues relating to University-wide facilities (such as electronic mail, printing, Liverpool Life or the PC teaching centres in the libraries or halls) should be directed to one of the Computing Services Help Desks, on Brownlow Hill, or in the Harold Cohen or Sydney Jones Libraries. However issues with laboratory 3 (the Computing Services Department laboratory) should continue to be reported via the Computer Science Helpdesk.

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### **6.3.3 Responsible Use of Computers**

All use of computing facilities within the University, both departmental and University-wide, are subject to the Regulations for the Use of IT Facilities and relevant Codes of Practice. These cover areas such as use of email and the web, teaching centres and laboratories, and the departmental, University and national academic computer networks. The full text of these Regulations and Codes of Conduct are available at <http://www.liv.ac.uk/csd/regulations/>.

The following summary is intended to highlight some of the most pertinent points, but should not be taken as a complete statement of what is/is not acceptable use of the facilities. Students are expected to familiarise themselves with the full Regulations and Codes of Practice via the URL given above.

#### **General**

- Computing and network facilities are provided for registered users only. By registering for use of these facilities, students will have agreed to be bound by the Regulations for the Use of IT facilities.
- Use of these facilities will typically be authenticated by a username and password. Students must keep their password secure and secret, and must not allow anyone else to access computer facilities by way of their username. Similarly, students must not attempt to use the facilities through someone else's username, or attempt to find out another person's username/password combination.
- The computing facilities are provided to support University work. Limited use of email and web for personal and social purposes is tolerated, but such use should not become excessive, or interfere with or cause difficulties for other users.

#### **Electronic Publishing (including Email and Web Pages)**

- Material must not be sent by email or published on the web, in such a way as to obscure or hide the source of such material, or to claim an authority that it does not possess.
- Publication of material (including sending by email) must abide by the copyright of that material. In particular, material should not be published without obtaining the permission of the copyright owner.
- Material must not be published that is insulting, abusive or offensive, or that advocates or condones illegal activities.
- The computing facilities are provided to support a student's programme of academic work. It is not permitted to use them for commercial purposes (including advertising).

#### **Use of Laboratories**

- Use of Labs and other shared facilities should show consideration for other users of the system. Loud or unruly behaviour, or the display of questionable material is not acceptable.

- Food and drink may not be taken into the Laboratories. Smoking is not permitted anywhere in the Department.
- Users must not attempt to open, move, disconnect or in any other way tamper with or attempt to destroy or damage any equipment. Headphones and USB devices may be connected to the front panel of a PC, but users must not otherwise connect any items of equipment to any part of the departmental computing facilities without first clearing this with the technical staff.
- Systems must not be left unattended. If students need to leave a terminal, they should either lock the screen (for a short absence) or log out of the system.
- The playing of computer games is not permitted at any time, unless specifically authorised for academic purposes.

#### Use of Networks

- All use of the departmental network must abide by the Regulations for Use of IT Facilities, and (where relevant) the JANET Acceptable Use policy.

#### 6.3.4 Laptops

All software required for Computer Science modules is available and configured on the computers in the Computer Science teaching labs, and much of this (though not all) is also available on the central University computing facilities. It is not necessary to have access to a personal computer in order to study CS programmes.

Some students find it convenient to work on their own systems, and many packages are available at little or no cost. The module coordinator can advise as to what software might be needed for that module. However it is important to check that assignments written on your own personal equipment also work as expected on CS facilities, **before** handing them in. This is particularly important for the final year project.

Certain modules (particularly COMP282, COMP327 and COMP329) require specialist facilities, typically only available within the Computer Science department.

Wireless connectivity is available via wireless access points operated by Computing Services, hence uses your University username/password. This can be configured by connecting to the 'AccessUOL' wireless service, start up a web browser, and click on "Connect Now". This should automatically configure your computer to use the EduRoam secure wireless service. You will typically be prompted for your (university) username and password. You may also see a warning regarding the 802.1x server certificate - this is perfectly normal.

#### Disclaimer

We make every effort to ensure the accuracy of this Handbook. However, it should be noted that the matters covered are subject to change from time to time. Where changes occur, we will endeavour to update this version as soon as possible.