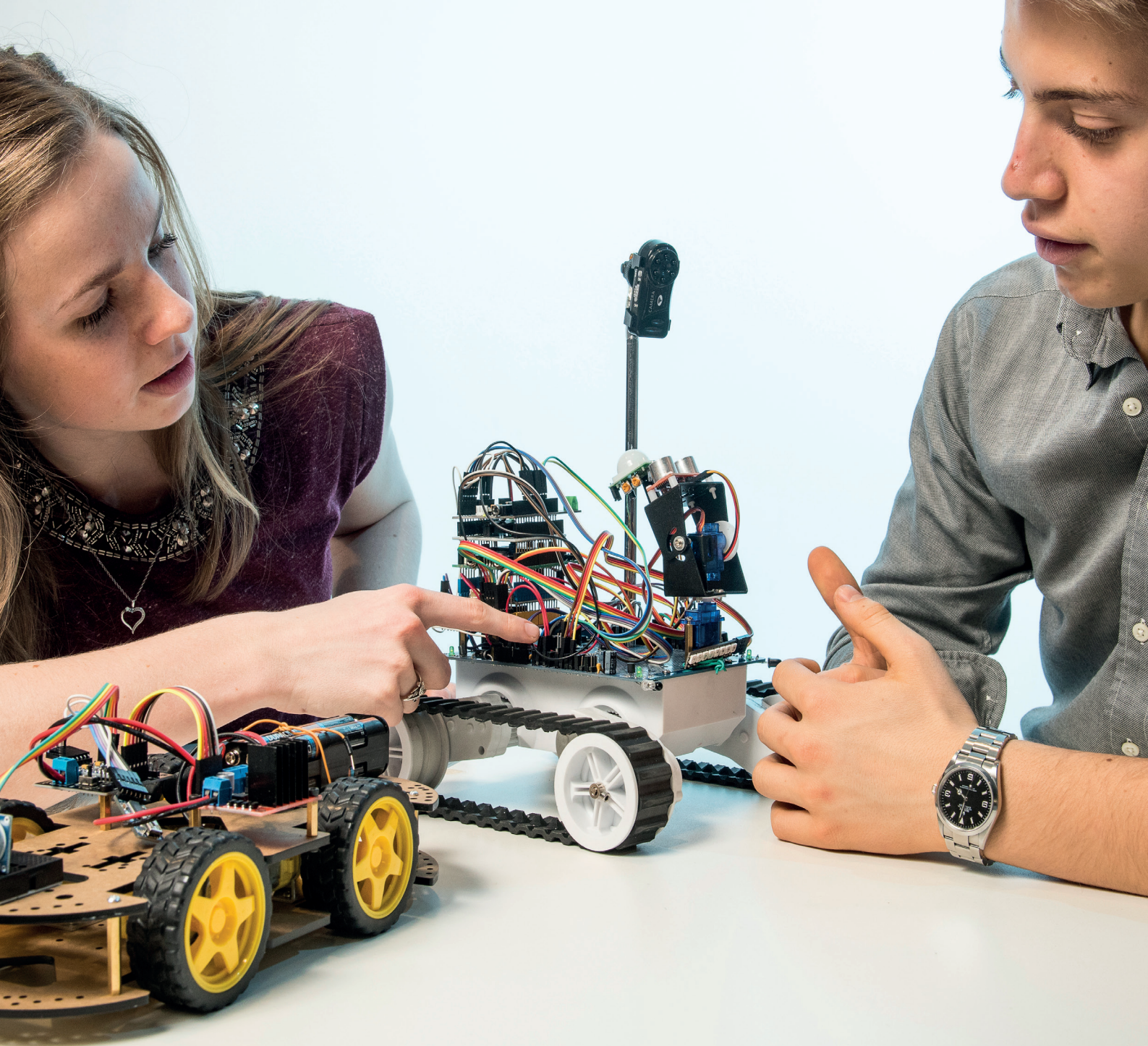# Department of Computer Science

BSc (hons) / MComp (Hons)

UNIVERSITY OF
BATH

Undergraduate Programmes Handbook

2017-2018

ACADEMIC YEAR 2017-18

These dates are correct at the time of going to print – please check on the University's semester dates website for up-to-date information during the year:
http://www.bath.ac.uk/about/organisation/semester-dates/2017-18/index.html/

Semester 1	Dates	Week(s)
New student arrivals	Saturday 23 September 2017 - Sunday 24 September 2017	
Welcome Week	Monday 25 September 2017 - Sunday 1 October 2017	0
Teaching Period	Monday 2 October 2017 - Friday 15 December 2017	1-11
Christmas vacation	Monday 18 December 2017 - Friday 5 January 2018	12-14
Semester 1 revision/ assessment period	Monday 8 January 2018 - Friday 26 January 2018	15-17
Inter-semester break	Monday 29 January 2018 - Friday 2 February 2018	18

Semester 2	Dates	Week(s)
Teaching Period	Monday 5 February 2018 - Friday 23 March 2018	19-25
Easter vacation	Monday 26 March 2018 - Friday 6 April 2018	26-27
Teaching Period	Monday 9 April 2018 - Friday 4 May 2018	28-31
Semester 2 revision/ assessment period	Monday 7 May 2018 – Friday 1 June 2018	32-35
Supplementary Assessment Period	Wednesday 15 August 2018 – Friday 25 August 2018	46-47

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Welcome

It is a pleasure to welcome you as a new undergraduate member of the Department of Computer Science. We will do all we can to assist you to obtain the best degree result that you can achieve. This requires both you and us to contribute to a partnership between 'learner' and 'teacher' and to accept joint responsibility for making your undergraduate studies a success. Our part of the deal is to deliver taught material that is relevant, high quality and up-to-date in   lectures, workshops, tutorials and seminars. In return, we expect you to attend these classes and undertake parts of the programme through self-directed study.

We want you to enjoy student life in Bath – this includes both work and play! We hope you will look back on your time here as a key element in defining your future and that some of the friends you make over the coming years will remain close for the rest of your life.

This handbook contains important information about the Department of Computer Science and the University of Bath. It contains details of the teaching programme, examination procedures and requirements for qualification to progress to the next year of study. *If you have any questions regarding procedural or other aspects of the course, please look in the handbook first you may well find the information you need.*

Most of the changeable information is located on the Department's Student Moodle site: go.bath.ac.uk/csmoodle

To find the most up to date information about the content of your programme and any current unit options go to go.bath.ac.uk/catalogue and select the current year of study and Computer Science.

Unit availability may change from year to year. During registration online (ROL), you are given a University username and password. This will allow you to access the Internet and the computer network for email and other computing services, including the Moodle virtual learning environment (**VLE**), from any of the computer stations on campus. It will also allow you to access free high quality Internet connectivity in all the wireless zones around the University.

About This Handbook

This Handbook is intended for all students commencing the BSc (Hons) Computer Science, BSc (Hons) Computer Science and Mathematics, BSc (Hons) Computer Science with Business, MComp (Hons) Computer Science and MComp (Hons) Computer Science and Mathematics (all courses are available with Study Year Abroad and placement year in industry) in the academic year 2017/18.

Please note that the contents of this Handbook are accurate at 18th September 2017 but that information may sometimes be subject to change after this Handbook has been issued.

- While this Handbook signposts information about **regulations for student**s, it does not have regulatory status itself, and the Regulations available online (Regulations for Students: www.bath.ac.uk/regulations and Assessment Regulations: www.bath.ac.uk/registry/nfa) are the most up-to-date and take precedence over the contents of this Handbook.
- For further information about unit and programme changes, see the **Unit and programme changes** section in this Handbook.

If in doubt about what applies to you, or if your circumstances change (for example if you are returning from a suspension of study, or transferring to a different programme) please contact your Director of Studies Dr Fabio Nemetz (years 1 and 2) or Dr John Power (years 3 and 4) for advice.

The Department

The Department of Computer Science attracts a highly qualified student intake and has built a reputation for excellent academic standards and highly sought-after graduates. The Department is located in the 1 West and the Department Office is 3 West 2.03.

Computer Science Undergraduate Programmes Handbook

Although all of these documents are relatively difficult to read, the every-day information that you will need to know is contained within this handbook. The handbook is the distillation of essential information for students, and contains sections which are part of the framework of regulations. In particular, the chapters on Progression and Award of Degrees are considered to be regulations that the examination boards will use to decide whether you can progress at the end of each academic year and on the level of your final degree award. You should read those chapters very carefully.

University context

The Department of Computer Science is part of the Faculty of Science. The Faculty exists as a unit for planning, financial management, and quality management purposes, led by the Dean of Faculty.

The primary committee of the Faculty of Science that relates to undergraduate students is the Faculty Board of Studies which has oversight of the quality management and enhancement activities of the Department, appoints the Director of Teaching, and approves the progression and degree awarding decisions of the Examination Boards of the Department. The Faculty Board of Studies includes student representation.

Many of the day-to-day management tasks of the University are devolved to each department, however, the University also maintains centralised support services for students. You should make good use of these facilities and they will be introduced in more detail later in this handbook.

Roles and Responsibilities

Head of Department
The Computer Science Department is led by the Head of Department, Professor Eamonn O'Neill, who directs all aspects of the department, operating through a number of nominated role-holders and through the deliberations of a number of committees. The following sections introduce some of these roles and committees.

Director of Studies
Day to day management and oversight of the taught programmes is provided by the Director of Studies, who is the person primarily responsible for the delivery of the curriculum, assessment processes, and student support, such as extensions of coursework deadlines or suspension of studies. The Director of Teaching is responsible for the development of the curriculum. Other role holders that undergraduate students are likely to come across are identified in following table:

Name	Role	Email prefix (@bath.ac.uk)	Tel.
Prof Eamonn O'Neill	Head of Department	e.oneill	3216
Prof Guy McCusker	Deputy Head of Department	g.a.mccusker	3578
Dr Alan Hayes	Director of Teaching	a.hayes	4489
Dr John Power	Director of Studies – Year 3 and Final Year students	a.j.power	4439
Dr Fabio Nemetz	Director of Studies – Year 1 and Year 2	f.nemetz	6635
Pippa McLernon	Undergraduate Programme Officer	p.mclernon	4856
Claudia Emery	Department Co-ordinator	c.emery	3241
Susan Paddock	Undergraduate Programme Administrator	s.l.paddock	6811

Academic and teaching staff in the Department

You will be taught by the following members of staff:

Name	Email address	Extension	Office number
Dr Russell J Bradford	r.j.bradford@bath.ac.uk	6977	3.59
Dr Joanna Bryson	j.jbryson@bath.ac.uk	3934	3.60
Dr Neill Campbell	n.campbell@bath.ac.uk	5950	3.53
Dr Darren Cosker	d.p.cosker@bath.ac.uk	5356	4.62
Prof James H Davenport	j.h.davenport@bath.ac.uk	6181	4.53
Dr Marina De Vos	m.d.vos@bath.ac.uk	5053	3.61
Dr Alessio Guglielmi	a.guglielmi@bath.ac.uk	6274	4.55
Dr Tom Haines	t.s.f.haines@bath.ac.uk	3215	4.19
Prof Peter M Hall	p.m.hall@bath.ac.uk	6004	4.63
Dr Alan Hayes	a.hayes@bath.ac.uk	4489	3.65
Dr Willem Heijltjes	w.b.heijltjes@bath.ac.uk	5932	4.67
Dr Rachid Hourizi	r.hourizi@bath.ac.uk	5934	3.64
Prof Peter Johnson	p.johnson@bath.ac.uk	3217	4.50
Dr Simon Jones	s.l.jones@bath.ac.uk	5927	4.52
Dr Kwang In Kim	k.kim@bath.ac.uk	6996	4.17
Dr Jim Laird	j.d.laird@bath.ac.uk	4483	4.64
Dr Christof Lutteroth	c.lutteroth@bath.ac.uk	5507	4.15
Prof G McCusker	g.a.mccusker@bath.ac.uk	3578	4.54
Dr Fabio Nemetz	F.Nemetz@bath.ac.uk	6635	3.58
Prof Eamonn O'Neill	e.oneill@bath.ac.uk	3216	4.57
Dr Julian A Padget	j.a.padget@bath.ac.uk	6971	4.65
Prof Steve Payne	s.j.payne@bath.ac.uk	4085	3.63

Dr J Power	A.j.power@bath.ac.uk	4439	4.58
Dr Christian Richardt	c.richardt@bath.ac.uk	3955	4.11
Dr Özgür Simsek	o.simsek@bath.ac.uk	5928	4.61
Prof Nicolai N Vorobjov	n.n.vorobjov@bath.ac.uk	6104	3.62
Dr Leon Watts	l.watts@bath.ac.uk	3166	4.66
Dr Yongliang Yang	y.yang2@bath.ac.uk	6673	3.52

Communication

Intranet websites

Vast amounts of information are provided on various websites within the University. You can find out your timetable from the website, your unit lecturer, syllabus details of the units you are taking, placements opportunities, etc. The main University of Bath internal website is a great place to start from: www.bath.ac.uk/students

To find the most up to date information about the content of your programme and any current unit options go to go.bath.ac.uk/catalogue and select the current year of study and Computer Science. Unit availability may change from year to year**.**

Email

Email is the primary mechanism for communication between the Department and students. Your University email account is the only account that is used for communications.

You should ensure that your email account does not become full of old messages – email messages will be discarded in this case so you may not receive vital departmental messages. Failure to receive or check your email cannot be considered as a valid excuse. As well as using email to contact students, staff expect students to make use of email to contact them.

Getting information

All information regarding year timetables, tutorial groups and personal tutors can be found on Moodle under the heading Computer Science Undergraduate Support. Urgent notices regarding room changes, lecture cancellations etc. may also be posted here.

Department Office

If you want to contact the department, and you don't know where to go or whom to see, your first point of contact should be the Department Office, **3 West 2.03**. You should also go to the Department Office to update any aspect of your student record. You can print forms from SAMIS on the web and complete these and take to the Department office for signature and action. This includes standard forms for coursework submission, transferring programmes, suspending or withdrawing attendance and changing unit choices, which is only be done in exceptional cases.

Coursework that is submitted in hard copy will be processed through the Department Office. Although coursework is often handed back by lecturers within classes, some lecturers may choose to hand the coursework back through the Department Office. In such cases go to the Department Office and ask at the reception desk for the piece of coursework you require.

Whom Should I See?

What you probably want to know is when you need to talk to a member of staff, and who you should go to see in these circumstances. The following is a quick guide about who to see within the department about some of the most common problems:

Department Office
- To inform of a period of illness - you should have a Doctor's note if you are absent due to illness for more than five days;
- To collect marked coursework;
- To obtain a transcript of your results;
- To inform of a change of address, name or phone number;
- To obtain forms to apply to change to a different unit or to change a programme of study;
- To identify problems with access to labs or computer equipment that have not been resolved by contact with Computing Services;
- To identify and resolve problems with the provision of administrative support within the Department;
- To identify timetable clashes or other timetable problems;
- To identify examination timetable errors or problems;
- To assist with disability advice and extra support for exams;
- For any other general enquiry.

Unit Lecturer
- To discuss and clarify lecture content;
- To obtain advice on additional reading, lab work or exercises;
- To identify areas of a lecture or the lecture notes that are unclear;
- To obtain advice on practice examination questions & past papers for the unit;
- To obtain further feedback on performance within coursework assessment;
- To identify problems within the conduct of a tutorial where approaching the Unit Tutor has not resolved the problem;
- To identify problems within the conduct of the lectures or assessment for the Unit.

Unit Tutor
- To review and amplify lecture content;
- To discuss and clarify tutorial content;
- To seek additional tutorial support;
- To identify problems with the conduct of the tutorial;
- To obtain advice on the completion of a coursework assessment. Personal Tutor
- To obtain feedback on your overall academic performance to date;
- To obtain advice on unit content when making unit choices;
- To obtain advice on the Units within which you can develop specific of key Skills;
- To identify and discuss personal, financial or medical problems which may affect your academic performance or your ability to successfully complete your programme of studies. In these cases you will be recommended to see other professionals to help with the circumstances - your Personal Tutor can help you in relation to the effect of the circumstances

on your academic work but is not authorised to provide financial, medical or personal counselling;
- To identify sources of additional academic support;
- To obtain advice on the suitability of a particular programme of studies;
- To obtain advice on the combination of units you wish to choose within a programme.

Director of Studies
- To obtain advice on University or Department procedures or regulations;
- To identify problems within a Unit which the Unit Lecturer has not satisfactorily addressed;
- To identify and discuss personal, financial or medical problems which you are unable or unwilling to bring to your Personal Tutor;
- To discuss problems with the support provided by your Personal Tutor;
- To discuss transfer from one programme to another, whether programmes within the Department or to programmes managed by other Departments;
- To discuss suspension or withdrawal from a programme of studies.

Faculty Placements Manager
- To obtain information on placement opportunities;
- To discuss an application for a placement;
- To inform about changes of circumstance whilst on placement;
- To submit forms relating to the monitoring of the placement;
- To discuss problems with the placement whilst on placement;
- To discuss the content or production of the log book of placement report.

Study Abroad and Overseas Students Officer
- To discuss and arrange study abroad;
- For all Personal Tutor support during a period of study abroad.

In many cases these individuals will direct you on to other people that you must see. For example, in cases of medical problems you will always be advised to go to the Medical Centre if you have not already done so, in cases of personal problems you will often be advised to utilise the counselling services, and in cases of learning difficulties you will normally be advised to consult the Student Disability Advice Team. We encourage you to familiarise yourself with these University provided facilities and utilise them without first consulting department members where appropriate.

Timetables

Programme and unit timetable information can be found online at: www.bath.ac.uk/timetable

You can also use MyTimetable to create a customised programme timetable that can be downloaded into an electronic calendar: www.bath.ac.uk/timetable/MyTimetable.htm

Timetables are *very difficult* to change. If there is a clash in the timetable with another class which we have not already identified and resolved, then you must bring this to the attention of the Undergraduate Programmes Administrator as soon as possible. This case will be resolved by re-timetabling that session if a large number of students are affected. If you have a severe personal circumstance which merits a timetable change, you should contact the Director of Studies. It is only possible to change tutorial or laboratory class attendance where there is more than one tutorial /

lab class per week. In these cases the change will normally be made by arranging to swap attendance with another student from the cohort. Clearly, if you are able to arrange a swap with a friend on the course this will remove the lengthy process of finding a person willing to change. Lecture classes and other whole-cohort classes cannot be moved under any circumstances.

No student is permitted under any circumstance to change allocated tutorial or laboratory sessions unless a request has been approved through the mechanisms described above.

Lists for coursework assessment marks are created from tutorial / lab. class allocation lists and therefore a change in attendance to another class may result in your coursework assessment marks not being entered. *Unit Tutors are permitted to refuse tutorial support to students who attempt to attend a tutorial / lab / class other than the one they are timetabled to attend*.

Expectations

It is a University Regulation that you attend regularly. If circumstances are such that you are not able to do so, then please contact your Director of Studies to discuss your situation and agree an appropriate course of action.

See Regulation 3: www.bath.ac.uk/regulations

Attendance Requirements

The University policy on attendance can be found at http://www.bath.ac.uk/students/visa-advice/attendance-monitoring/index.html

It is clear from past academic records that attendance and performance within assessment are highly correlated. **The Department of Computer Science will exercise its right not to permit assessment for students who are not in regular attendance.** Where irregular attendance is noted a student will be asked to meet with their Personal Tutor regarding the situation. If this warning is not sufficient to improve attendance, the student will be asked to meet with the Director of Studies and will be sent a written warning. If attendance remains low, the funding authority will be contacted and the student will be sent a final letter of warning to all registered addresses. Further irregular attendance may result in the withdrawal of rights to sit the assessments in the Units where irregular attendance is identified.

Where non-attendance is identified, the same procedure will be applied. However, each letter will warn the student that failure to contact the Department will result in automatic withdrawal from the programme. If the student fails to contact the Department within two working weeks of the final letter of warning, procedures will normally be started to withdraw the student from the programme.

Department Safety

For students on placement, both the University and the placement provider have a duty of care towards the student. The Department of Computer Sciences will prepare students for placement and ensure they are aware of relevant health and safety aspects; this is of a general nature and does not include the specific information needed for any particular job or workplace.

During the placement we expect students to be effective, safe and reliable individuals. However, during the placement period the student is under the control of the placement provider and therefore the statutory duty of care and consequent liabilities rest with the provider. The students' placement providers should treat them in the same manner as a permanent employee with regards

to their health, safety and welfare. It is therefore the University's expectation all placement providers will:

- provide the student with an induction in the workplace health and safety arrangements, including fire precautions, specific hazards and health and safety precautions;
- Include the student in the risk assessment programme as it affects activities undertaken by them;
- Provide appropriate instruction and training in working practices and in the particular control measures identified in risk assessments;
- Have a system of recording and investigating accidents and incidents. The placement provider should notify the University of accidents and incidents involving our students.

The University is also required to check whether the student will be covered by employer liability and public liability insurance policies whilst on placement. If the student will not be covered by such policies then the placement tutor should be informed immediately.

If you have any questions about any aspects of the health and safety arrangements for the placement please contact either the placement tutor or staff within Health, Safety and Environment (WH3.26) who monitor the health and safety management of the University and advice on health and safety issues. Contact the UHSE Administrator UHSE@lists.bath.ac.uk or 01225 384088 if phoning outside the University, Ext 4088 if phoning within the University.

Further information
www.bath.ac.uk/hr/stayingsafewell/index.html

Using computers
Misuse or overuse of display screen equipment can give rise to Work Related Upper Limb Disorder (WRULD, often referred to as RSI), physical discomfort and eyestrain. The following general advice is given:

- Prevention is better than cure.
- Get good posture and correctly placed equipment now.
- Sit back in your chair, with back straight, head upright and chin in.
- Forearms should be approximately horizontal.
- The chair should give good lumbar support and feet should sit flat on the floor.
- The screen should be directly in front of the user (not to one side) and should not flicker.
- Ventilation should be effective and lighting should be suitable and sufficient.
- To prevent visual fatigue, do not work for more than 50 minutes at a screen before spending 10 minutes doing something completely different.

Your own PC

Although the Computing Services labs are available for you to use, space is very much at a premium and you may find that you have to use the labs late at night or early in the morning to get sufficient time on the machines. If you are able to afford your own PC, it would be a wise purchase for the time you are on the course. None of the software used within the degree programmes requires a very powerful computer, and so those on a tighter budget should find that an older second-hand computer or cheaper lower-specification new computer will suffice. If you do not currently own a computer and can afford to purchase a new PC, the *Computing Services Shop*, which is located within

the Library, is able to supply computers (and computer components) at prices that are often lower than you would pay for equivalent machines on the high-street. Alternatively, you will often find good, low-price laptops from PC World or from Dell.

The following sections provide you with further information on how you can use your computer to access the University facilities whilst you study at the University.

Network links

If you are able to obtain a place within a University residence you will find that each room is equipped with a network point that you can plug your PC into. Details on network connections can be found here:

go.bath.ac.uk/b9in

Further help and advice is available to you from the Computing Services Helpdesk (also located within the Library) should you run into difficulties:

go.bath.ac.uk/oepd

The network link is high-speed (100Mbps), making it simple to download software that will be useful for you on the degree programmes.

Operating system

The academic staff within the Department of Computer Science make use of a variety of operating systems and software, depending on personal preference - Windows, MacOS, and Linux. If you need to decide which operating system to place on your own PC you will find that installing Microsoft Windows operating system will make life simpler because much of the software provided on the Computing Services network is aimed at these operating systems, see:

go.bath.ac.uk/j6qh

If you need to purchase a Microsoft operating system, Computing Services has a special cut-price deal available for students - you should consult the Computing Services Shop for more details.

No unit within the Computer Science department's programmes is wholly reliant upon a Windows-based product and some Computer Science students decide to go for the option of using Linux. Linux is free to download, provides a mature desktop environment, and is able to run file-compatible equivalents of most Microsoft software products. We recommend Ubuntu or SUSE Linux distributions.

Email and web browser

The standard email client and web-browser recommended by Computing Services are free software and available across many operating systems. These are each available from the Computing Services network for you to download and install on your PC.

If you prefer an alternative email client or web-browser, the Computing Services network should be able to accommodate this. The Computing Services website provides clear instructions on how to configure many of the popular email clients. For further details see:

go.bath.ac.uk/7ud5

Productivity software

The standard productivity software used within the University of Bath is Microsoft Office. This is normally an expensive product, but the Computing Services Shop provide Microsoft 365 pro plus

free to all students. Please see: www.bath.ac.uk/bucs/services/office365proplus.html for further details.

If you are running Linux, or you want an Office-compatible product for MacOS-X, Windows or Linux, then you should consider installing OpenOffice. This *free* multi-platform productivity software suite offers file-compatible equivalents of Microsoft Word, Microsoft Excel, Microsoft Draw and Microsoft PowerPoint, with a very similar look-and-feel to these Microsoft products. It is available for download from:

go.bath.ac.uk./nugv

Resources: Your responsibilities
Although the University provides an extensive range of facilities, services and opportunities to support student learning, it is the responsibility of each student to access these resources. Unfortunately, it is not possible, nor desirable, to provide intensive individual support to each student. Part of the learning of being in a University environment is learning to assess your own study needs, and to access the learning support that is made available to you.

If you are unsure about what resources or services you should be accessing or how to access a resource, your Personal Tutor will be able to give you the appropriate guidance, assistance and advice.

Behaviour and conduct
You are given the privilege of access to the network and PC provision of the University. However, there are responsibilities that come with this privilege. You should make sure you acquaint yourself with the "acceptable use" policy, If you fail to adhere to this policy, your access to the computer provision of the University may be withdrawn.

Data protection
The Data Protection Act 1998 concerns personal privacy and regulates how information about living individuals may be collected, used, retained and disclosed.

The Act applies to all personal data whether it is in manual or electronic format. Individuals are entitled to see all information kept about themselves.

As Computer Science students you are also subject to the Data Protection Act. You should ensure that you do not maintain data about other individuals without their knowledge, and that you comply with the principles of the Act for any such data that you maintain.

The University's Data Protection Guidelines may be accessed via the data protection website:

go.bath.ac.uk/sox0

Weblogs, chatrooms, etc.
As a Computer Science student we expect you to maintain the highest standards of conduct not only in the University but also on computer networks. If you host or participate in weblogs, chatrooms or use email, you should be aware that you are liable for any comments you make, even under the guise of another persona. You are not permitted to comment on individuals, the Department or the University in a manner that may bring the University into disrepute.

Programming Languages

Programming is an essential component of every computer science degree. Being able to write programs and discuss programming concepts is an absolute must. The British Computer Society considers programming a key skill and will not accredit degree programmes that do not have programming in them.

We believe it is important that students not only learn programming skills within a particular language but acquire the necessary skills for them to learn new programming languages. With new programming languages appearing, as a matter of speech, every week, there is a good chance that the languages students are taught at university are not the languages that will be in vogue when they graduate, or used later in their careers, so being able to learn new programming languages is essential.

The ability to specify, design and write substantial programs for a computer is fundamental to computer science. The programmes we run in this Department are not I.T. programmes (it is not purely about the use and application of computers). Even if you intend to follow a career that does not involve computer programming an in-depth understanding of the problems involved in the construction of computer systems is extremely important.

The first year programming units are more than learning a programming language. We will look into problem solving techniques and provide you with the necessary concepts to teach yourself any programming language you want, and to compare different ones to find the one most suitable for a problem you need to solve. You will also study basic algorithms to solve common problems, general design and implementation strategies. We will do this using two languages: C (or Python and Java. More details on first year programming can be found in the pre-course material that was distributed and the unit pages of the two programming units (CM10227 and CM10228).

Building on the fundamental concepts of the first year, the second year introduces a variety of programming languages illustrating the various programming paradigms. Procedural, object - oriented, declarative and function paradigms are discussed using languages like C, C++, AnsProlog, Lisp, Haskell. The emphasis in studying these languages is to appreciate their similarities and differences and obtain further techniques in learning different programming formalisms. At the end of the second year, you should be able to independently learn any new programming language, describe its main features of different paradigms and languages, and be able to select the most appropriate language for the task at hand.

No new languages are taught in the final year. Students are expected to have mastered programming to a sufficient level that they can learn a new language independently when it is necessary for any of their units, especially the final year project.

Vendor Neutrality Statement

The teaching team chooses the relevant teaching tool that best meets the requirements and demonstrates a specific topic rather than endorsing or maligning a particular product.

Units

Degree courses involve the study of a requisite number of *units*. A unit is an assessable block of study, which may be in the form of a lecture course or an approved project. A *p*rogramme is an identified set of units leading to a named award. Each programme will contain units that you are required to take - *Mandatory Units*. There may be units that you are required to choose between -

Optional Units. You are allowed to undertake a small number of units beyond those included in the programme – *Free or extra curricula units*. For a degree to be awarded the right number and combination of units have to be studied. The programmes are constructed so that students following a prescribed programme will complete the right number of units at each level. Details of available units for each programme are given in a Programme/Unit Catalogue.

Each Unit is delivered at a certain academic *level*. For Undergraduate Units, these are Levels 1, 2 and 3 - equating roughly to the expected academic performance of a student in Years 1, 2 and 3 (respectively) of their studies. MComp students will study units at level 4 in their fourth year. The Level of a unit is identified in its *Unit Code*. For example, the unit code CM10194 specifies the following: CM - the unit is managed by Computer Science; 1 - the unit is at Level 1; 0194 - this is the unit identifier which will be unique within the Department.

A Unit provides, typically, three hours of taught material per week. You will typically study five units per semester. Thus, approximately 15 hours of the week will be within timetabled classes. You are expected to use the remaining time in personal study and working on your assessed coursework. Thus, you should dedicate a total of 8 hours per week per unit - three hours of taught time and five hours personal study time.

> Note: Some degree programmes include units that are delivered by other Departments. These units are managed and assessed under the rules of the department that delivers the units - it is up to each student to familiarise themselves with the different requirements of the department delivering each unit.

Each unit is *credit-rated*. This means that the successful completion of a unit will provide you with a number of *credits*. The credit scheme used by the University of Bath is recognised throughout Europe, and you can therefore use the credits you obtain within the University of Bath to request advanced entry into other Universities should you decide to transfer. Each unit is normally worth 6 credits. A ''Unit'' might actually be a *Double Unit*, in which case it will be worth 12 credits and will usually require 16 hours of personal study per week. Occasionally you will find a unit that is a H*alf Unit*, worth 3 credits and requiring four hours personal study per week.

Unit specifications
Each unit that is provided within the University of Bath is described within a *Unit Specification*, examples of which are accessible from the Programme and Unit Catalogue:

http://www.bath.ac.uk/catalogues/2017-2018/cm/cm-proglist-ug.html

The Unit Specification identifies the aims and objectives of the unit and the learning outcomes that students taking the unit should achieve by the end of the unit and which they will be assessed against. It also identifies the pre-requisite units which a student must have received credit for before attempting the unit. The Unit Specifications also identify the key skills that are supported within the unit.

Optional units
Some programmes provide a range of optional units that you can choose from. It is unusual to find optional units available in the early years of your study because we need to ensure that foundational

material is presented to all students. However, as you progress you may find that more options become available

Unit list

Unit Code	Unit Title	Semester	Unit Lecturer(s)
XX10190	Introduction to Programming & Java	2	Davenport, Prof James
CM10227	Principles of Programming 1	1	Hourizi, Dr Rachid
CM10228	Principles of Programming 2	2	Hourizi, Dr Rachid
CM10251	Computing as a science and engineering discipline	All Year	Watts, Dr Leon/ Jones, Dr Simon
CM10194	Computer Systems Architectures 1	1	Nemetz, Dr Fabio
CM10195	Computer Systems Architectures 2	2	Bradford, Dr Russell
CM10196	Discrete Maths for Computation	1	Vorobjov, Dr Nicolai
CM10197	Analytical Maths for Applications	2	Vorobjov, Dr Nicolai
CM20216	Designing Interactive Systems	All Year	Nemetz, Dr Fabio/Lutteroth, Dr Christof
CM20217	Foundations of Computing 1	1	Vorobjov, Prof Nicolai
CM20219	Fundamentals of Computer Graphics	1	Richardt, Dr Christian
CM20220	Fundamentals of Pattern Analysis	2	Cameron, Dr Ken
CM20252	Artificial Intelligence	2	Simsek, Dr Özgür
CM20253	Comparative Programming Languages	2	Bradford, Dr Russell
CM20254	Data Structures and Algorithms	1	Lutteroth, Dr Christof
CM20255	Databases	1	De Vos, Dr Marina
CM20256	Functional Programming	2	Heijltjes, Dr Willem
CM20257	Integrated Group-based Project	All Year	Payne, Prof Stephen
CM30070	Computer Algebra	1	Davenport, Prof James
CM30072	Safety Critical Systems	1	Nemetz, Dr Fabio
CM30073	Advanced Algorithms and Complexity	2	Vorobjov, Prof Nicolai
CM30075	Advanced Computer Graphics	2	Cameron, Dr Ken
CM30078	Networking	1	Bradford, Dr Russell
CM30080	Computer Vision	2	Cameron, Dr Ken
CM30082	Individual Project	All Year	Guglielmi, Dr Alessio
CM30141	Advanced Human-Computer Interaction	2	Payne, Prof Stephen
CM30171	Compilers	1	Padget, Dr Julian
CM30173	Cryptography	2	Laird, Dr Jim
CM30174	Intelligent Agents	1	Padget, Dr Julian
CM30225	Parallel Computing	1	Bradford, Dr Russell

CM30226	Logic & Semantics of Prog Languages	2	Power, Dr John
CM30229	Intelligent Control and Cognitive Systems	2	Bryson, Dr Joanna
CM40178	Research Project	AY	Guglielmi, Dr Alessio
CM40149	Collaborative Systems	2	Jones, Dr Simon
CM40179	Entrepreneurship	2	Hourizi, Dr Rachid
CM50121	Safety Critical Systems	1	Nemetz, Dr Fabio
CM50123	Networking	1	Bradford, Dr Russell
CM50150	Interactive communication design	2	Payne, Dr Steve
CM50200	Mobile and pervasive systems	1	O'Neill, Prof Eamonn
CM50205	Advanced Human Computer Interaction	2	Payne, Prof Stephen
CM50206	Intelligent Agents	1	Padget, Dr Julian
CM50209	Security and Integrity	2	Laird, Dr Jim
CM50210	Cryptography	2	Laird, Dr Jim
CM50230	Intelligent Control and Cognitive Systems	2	Bryson, Dr Joanna
CM50244	Computer animation and games 1	1	Yang. Dr Yongliang
CM50245	Computer animation and games 2	2	Yang, Dr Yongliang
CM50248	Visual Understanding 1	1	Richardt, Dr Christian
CM50249	Visual Understanding 2	2	Kwang, Dr Kim In
CM50264	Machine Learning 1	1	Haines, Dr Tom
XX50215	Statistics for Data Science	1	Cameron, Dr Ken
EE40098	Computational Intelligence	1	Wilson, Prof Peter

To find the most up to date information about the content of your programme and any current unit options go to go.bath.ac.uk/catalogues and select the appropriate year of study. Unit availability may change from year to year.

Free/extra-curricular units
In addition to the specified programme for the year, students are also permitted to take **one** 6 credit unit or, equivalently, **two** 3 credit units. These *free/extra-curricular units* will not count for progression nor towards the degree but they will be included on the student's transcript of achievement. Using this option you can select to study a language, learn more about Business or Education, or sample an area unrelated to your current studies. Units you may choose are identified as *Generally Available Units*, and these are listed in the *Catalogue of Generally Available Units*. Any additional units chosen *must* be approved by the Director of Teaching.

Selecting your units
In order to be included for assessment on any unit you need to be *enrolled* on that unit. Many of the units you study are compulsory units, and by enrolling on a programme you are automatically enrolled on those units. You will be asked to select your optional units when options become available to you. Students are required to specify the units they will be taking using the on-line unit

selection form. For returning students this is typically in April/May of the preceding academic session.

To find out more about unit contents when selecting units you should consult the Programme/Unit Catalogue for the relevant year. Note that some units may run only every other year and so you should ensure that the units they have selected are scheduled to run that particular year.

> Note: The University cannot guarantee to timetable any selected Additional Unit for you. Every effort will be made to accommodate your choice, but if a timetable clash cannot be resolved you may have to set aside the Additional Unit.

Many units also have pre-requisite requirements - you must have studied and gained credit in each of the specified pre-requisite units in order to study that unit. You will not be allowed to study a Unit for which you do not have the pre-requisite knowledge.

Failure to complete the unit selection process may prohibit enrolment in the following year, and will certainly lead to constraints in the choices available because timetabling will already have been completed. Failure to select appropriate options will mean that you will not be enrolled on those options. *If insufficient credits are completed in any academic session, you may not be permitted to proceed until sufficient credits are made up in the following academic year.* No student can be awarded a degree until sufficient credits at each level are completed.

> Note: Although the Department will endeavour to ensure that all students have selected an appropriate programme of studies, the selection and completion of an appropriate programme of studies remains the responsibility of the student.

In the final year some of the degree programmes allow students to select "*any other units approved by the Director of Studies* ". These units can be selected from the *Generally Available Units* or from any suitable unit that the student identifies and onto which the Department providing the unit is prepared to accept additional students. Students wishing to take such units should consult the Director of Studies. In general, such units should be Level 3 units. If choosing these units, you must ensure that you select units with credits at an appropriate level for your degree programme.

Changing units
Towards the end of Semester 1 you will be required to check online and confirm your unit choices for Semester 2. At this stage you can in exceptional circumstances alter your choice of optional or free extra-curricular units for Semester 2 in the light of your performance in Semester 1. There is a set deadline within which you *must* complete this process, and units cannot be changed once the semester has started.

Learning and teaching
A unit is managed by a *Unit Lecturer* (see the section on Responsibilities and Roles), who will normally have created the course material and who delivers the lectures for the unit. The Unit Lecturer is responsible for the quality of all aspects of the delivery of the unit - this includes responsibility for the quality of seminars, tutorials and laboratory classes, which may be delivered by other tutors.

It is vital that you address any misunderstandings or confusion as early as possible. Lecture topics tend to build on earlier material. Failure to resolve areas of confusion can prevent you from making any progress later on. Students who get into this situation are rarely able to resolve the problems before examination time, limiting their potential examination performance.

Tutor support

Many units, particularly those delivered to a large number of students, will have tutorials, seminars and laboratory classes delivered by other tutors. These *Unit Tutors* are often postgraduate research assistants from within the Department. They will use tutorial materials that have been supplied by the Unit Lecturer, but will have prepared the delivery of the session themselves.

Many tutorial or laboratory classes will provide material that you are intended to complete within the class. Some classes - in particular seminar classes - will provide you with material prior to the class that you must prepare in advance. It is important that you complete this work before attending the class, because the learning that takes place within the class is dependent on the understanding gained by the members of the class. Failure to complete this work could severely limit the time available for tuition for the group as a whole. If, because of illness or other personal reasons, you are not able to complete the reading you should still attend the class. In such cases it would be appropriate to warn the tutor that you have not completed the work before the session begins so that the tutor can take this into account during the lesson.

Tutorials, seminars and laboratory classes are often in smaller groups than the main lectures for the unit. This provides you with an opportunity to ask questions that will help to clarify your understanding of the material, and to seek further help when difficulties are encountered. You should not feel afraid or embarrassed to ask questions within these sessions. It is likely that many others have the same questions but are also too hesitant to ask for help. By seeking help you are likely to actually be helping the whole group. If the tutor believes that others in the group have already understood the particular point that you are asking about, you will find that the tutor will either spend time aside with you during the class to resolve the problem or will recommend a meeting outside the tutorial to sort out the difficulties.

Personal study

As the preceding sections indicate, University teaching is not represented by just the timetabled lecture, tutorial, seminar and laboratory sessions. It is also, and possibly primarily, within your individual study that supports these timetabled sessions. It is important to get used to setting aside time within each week to complete this additional personal study. The best way to do this is to add time slots to your personal timetable in which you timetable yourself to do the additional study required for each unit. Having set aside this time, you must then ensure that you use this time each week.
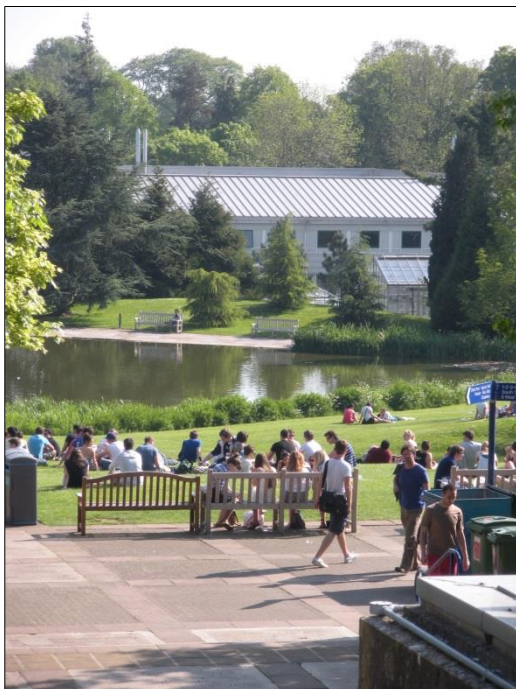
A useful way to ensure that you take the appropriate study time is to team-up with a group of friends who arrange to meet at the library at agreed times to study. If you are involved with others in a club or society, you could plan to meet to study for a few hours before or after the meetings of the club or society. By planning your study around your friends you can encourage one another to continue to set aside appropriate study time, as well as enjoy their company in the regular coffee-breaks!

In your personal study, you should ensure that you keep ahead with any additional reading that is required. You will find that much of the information found within the additional reading is needed in the coursework assessment. If the reading is left until too late you will end up with too much to do when the coursework assessment is set. Reading ahead will help prevent the build-up of work in the busy assessment periods of each semester.

Completing assessments

All units include assessments to demonstrate that students have satisfied the learning outcomes of the unit. Some units use a combination of coursework and examination assessment. Where this is the case, the weighting of the results achieved within the examination and the coursework elements of the assessment is identified within the Unit Specification. For most units this is 75% examination and 25% coursework, although in a few units the coursework component may be higher. As you move towards the final year the examination component becomes more prevalent, with many units assessed by examination only.

The conduct of assessment is discussed in more detail within the Assessment chapter - it is very important that you read and understand the contents of that chapter.

Options Choices

Although students initially register for one particular degree programme, it is sometimes possible to change to a different degree programme within the University. In order to complete any programme change you must complete CC *Form C (Notification of Change of Programme, Change of Unit Choice CC Form B* or CC *Form D (Interdepartmental Change of Programme)*, all of which are available from the SAMIS on the Web. Once the details have been entered into the form, you need to take these to the Department Office as the change *must* be approved by the Directors of Studies for both the programme you are leaving and the programme into which you wish to transfer.

In the first six weeks of their first year of study students may change the subject area of their degree to a related programme (e.g. BSc Computer Science with Business to BSc Computer Science) *provided* that their programme of study satisfies the appropriate rules and regulations and subject to the approval of the Director of Studies. Any student interested in transferring should contact the Director of Studies.

During their first year of studies, students may also apply to transfer from one degree format to another (e.g. from a 3-year BSc degree course to a 4-year BSc with Industrial Placement). The application should be made, in writing, to the Director of Studies. The application should state to which programme (3-year BSc, BSc with Industrial Placement, BSc with Overseas Study) the student wishes to transfer. After the first six weeks such changes will be permitted only under exceptional circumstances.

Any student on the sandwich course for whom an industrial placement cannot be found will automatically transfer to the 3-year degree course or may, exceptionally, be permitted to suspend attendance for that year of study.

Final Year Project

The final year individual project is an important component of the undergraduate degree programmes within the Department of Computer Science. It is the primary opportunity for you to demonstrate the range of knowledge and skills acquired during your programme of studies.

A complete project handbook can be accessed on the Moodle page of this unit:

moodle.bath.ac.uk/course/view.php?id=357

The individual project is the 24-credit unit *CM30082 Individual Project* that spans the academic year. The assessment for the unit is the assessment of the final project submission in Semester 2.

Students are asked to choose their project over the summer, on the unit's Moodle page, from a list of project topics suggested by members of staff or students can come up with their own proposal. In the latter case, approval has to be obtained from the project coordinator and a member of staff has to agree to supervise this project.

Given the importance of this unit, a number of way points have been set up to keep students on track with the work involved. During the first semester you will be asked to submit a project proposal and literature review. While this is mainly for feedback purposes, failing to submit a satisfactory document could result in you not being allowed to progress to the second semester. In the second semester a progress report has to be completed. The unit is assessed via a demonstration of progress presentation and the submission of a dissertation.

Note: The Department makes routine use of plagiarism detection software.

Note: The Department reserves the right to call a student in for a viva-voce examination on the project in cases of a mark dispute and where the External Examiner deems further investigation to be necessary. You must make yourself available for a possible viva-voce examination after the completion of the final year examination process.

Throughout the final year project there are various ways of obtaining feedback regarding your progress. Your supervisor will be more than happy to discuss your progress at any of the supervisory meetings. More formal feedback points are available when the project proposal, literature review, demonstration of progress are being marked. The first two are ideal points to obtain detailed feedback on your academic writing style. Feedback will either be provided via Moodle together with the marks, or during a supervisory session. Do not hesitate to contact your supervisor to get more detailed feedback at any stage of the project.

By providing drafts of the materials you are going to submit well in advance, you give your supervisor the opportunity to go through the material and provide you with detailed feedback. However, do note that your supervisor is neither your spell-checker nor your editor. Nor can you expect them to give you any detailed feedback if you give them the draft a day before the deadline, a week is more appropriate. If that is proving difficult, you could try to warn them of a late draft submission. That way they might be able to free some of their time to read your document. Remember, most supervisors are looking after several students.

Given the importance of the project, it is vital that students manage their project well throughout the final year. All final year students will receive a project handbook and additional information and support through lectures and tutor discussion on entry to the final year.

Professional accreditation

The Department values its links with industry and professional practitioners. Accreditation by the *British Computer Society* (BCS) is a valuable demonstration of the quality and relevance of our provision. In order to achieve accreditation the department is subject to an accreditation visit on average once every five years. Documentation required by the BCS is produced for this visit, identifying the programmes that are to be considered for accreditation and exemption, their curriculum content and key quality indicators. A panel of BCS members will visit the Department to consider the report and reflect on the quality of provision. As well as granting accreditation the panel will identify areas of weakness and highlight good practice.

Professional Placement and Study Year Abroad

Placements

The University is committed to supporting placements in order to enhance the vocational relevance of its programmes and the learning experience of its students. Each Faculty and the School has a dedicated placements team to support and guide you through the process of applying for, securing and successfully completing a placement. The contact details for your Placements Manager and Placement Tutor can be found in the front of this Handbook.

You can expect to receive placement preparation support on the application process (i.e. CV writing, production of covering letters and applications, interview skills, assessment centres) as well as practical placement support (such as where to find information on visas, accommodation, money etc).

Before going on placement you will receive a University Placement Handbook containing generic advice and information for whilst you are on placement:
www.bath.ac.uk/internal/placements/documents/Placement_Handbook.pdf

You will receive programme specific information directly from your Department. If you are on a placement of one semester or longer in the UK you can normally expect to be visited by staff at least once during your placement. If you are on a placement overseas, staff will either visit, where practical, or arrange an alternative way of keeping in contact.

During the placement you will be expected to complete the Personal Objectives and Learning Outcomes forms (POLO) or equivalent (which helps you to structure your placement objectives and personal development) [and the Goals, Objectives and Learning form (GOLF), where applicable (for assessing your performance against these objectives).]

A re-induction activity will be conducted to welcome you back from placement and update you on any changes that may have occurred at the University during your time away.

Professional placement

There are many benefits to be gained from a period in industry. Students can see how organisations work at first hand, obtain work experience, apply their academic skills in a working environment, acquire many new skills, and have a period away from the university that gives them

time to consider their career options. Many students find that this period is beneficial to their studies when they return to the university, a fact borne out in the final year averages. <u>You will be fully supported throughout the placements process by the Faculty Placements team and your Director of Studies for Placements (who provides academic oversight and assessment of the programme).</u>

This section provides some introductory material to the placement year. For more information you should contact the Faculty Placements Manager, Louise Oliver (L.Oliver@bath.ac.uk)

First Year placement programme

<u>The placements programme starts in the first year of your degree programme. You will be required to attend skills development sessions. This programme is employer-led and will provide you with an insight in how the skills you will gain through your studies will be transferred into the work place.</u> During this programme you will complete specific activities related to the application and interview processes used widely throughout industry, whilst increasing your commercial awareness of the opportunities available to you at undergraduate and graduate level. This SORT (self-awareness, options, research, transition) programme is essential in your preparation for placement applications. All students must complete this programme to continue on the placements programme.

Finding your placement

Most employers start accepting applications from September, but some will open from July at the end of your first year. Some interviews can arranged as early as October. All students are expected to start submitting applications at the start of the second year to ensure the best possible chance of securing a suitable placement.

During the second year of the placements degree programmes, students are required to attend the Placements Development Programme. This programme consists of activity based workshops. This builds upon the skills developed during the first year SORT programme with particular focus on assessment centre activities, interview skills, networking and career development.

Competition for placements is now very intense. Gaining a place, even with the support of the professional placement staff, requires commitment. Your commitment to the scheme is vital. However, the effort required does reap its rewards. If you successfully secure a placement and use the opportunity well it can be a good indicator to a future employer of an applicant's capabilities, self-discipline and determination to succeed and may lead to a graduate offer.

The Department supports each potential placement student through the work of the Faculty Placements Manager (Louise Oliver). The Faculty Placements Manager will do her utmost to find and direct students towards appropriate placement opportunities, and will provide help and guidance in the creation of C.V.s, filling in application forms, interview technique, and guidance towards other University-provided training that may be helpful. All potential placement students will have immediate access to new placement opportunities, and will then be able to find out more information about the opportunities they are interested in through their placements Moodle course.

Companies are interested in finding the best candidates so it is up to the candidates to convince the employers that they are worth employing once the interviews opportunities arise. All students are expected to behave with the utmost professionalism and honesty in the application and interview process - the reputation of the University is very dependent upon the way in which the general public view students of the University. Students are required to accept the first offer they receive, unless there is mitigation not to do so. We are pleased to be able to provide employers with high-quality students, and are proud that in the past our placement rate has been very close to 100%.

In the past some students have tried to find their own placements. If students wish to make a specific application, they should approach the Faculty Placements Manager to discuss it as soon as possible. Not all employment provides a suitable industrial training experience to satisfy the academic requirements of the placement. The Faculty Placements Manager will therefore also assess the suitability of the work you would be likely to undertake before proceeding.

The Faculty Placements Manager will send information to the employer about the way in which the professional placement is organised so that the employer can decide whether they are able to meet the additional assessment requirements of the placement. Whilst on placement, each student must complete Personal Objectives and Learning Outcomes (POLO) forms. POLO1 is completed after the first month of the placement and POLO final at the end of the placement year. The POLO forms form a part of the formal Placement Report. The Placement Report also includes a technical report and learning reflection, and is submitted at the end of the placement year for assessment. Each student must also ask their placement employer to complete Goals Objectives and Learning Forms (GOLF) at the end of every quarter that reflect performance and progression. The student must organise a meeting to go through each GOLF report with their placement employer to discuss and set specific objectives. The GOLF reports must be submitted for assessment. The student must attend the Poster Event in Autumn to present a Poster on their placement experience. The placement assessment requirements provide further opportunities to develop and assess communication and written skills.

Although the great majority of placements will continue to be within the UK, for students who have a firm commitment to an overseas placement, it may be possible to seek a position on the Continent. Louise Oliver currently handles overseas placements. Clearly, when applying for a placement your Year 1 Examination results are vitally important. The best possible examination results are your most valuable asset. Employers offering attractive, well-paid placements are able to set high standards in the knowledge that a sufficient number of applicants will meet their requirements. The majority of employers are looking for students to achieve an average of 60% or higher in their first year of study.

When applying for a professional placement, the placements staff will provide the following help

- Induction into the placements process;
- Documentation to explain the placement and to help you understand the placements process;
- Advice and support during the production of your C.V. and draft covering letter;
- A mock interview to help you hone your interview skills;
- Regular updates of current placement opportunities;

- Up-to-date detailed information on current placement opportunities, available from the placements e-learning course.

You are responsible for

- Attending all Placement Development Sessions both in the first and second year of your programme;
- Creating a C.V. and completing the SORT programme by the Autumn term of your second year of studies;
- Providing the Faculty Placements Manager with all necessary information to aid them in their search for an appropriate placement;
- Regularly checking the placements opportunities via the placements e-learning course;
- Writing applications and sending them to employers;
- Attending all interviews that you are offered and presenting yourself and your abilities honestly, professionally and responsibly;
- Committing to complete the placement once a placement opportunity has been accepted.

Note: The professional placement staff have no power to coerce employers into employing students - you will be employed only on merit.

When on the placement the placements staff will maintain regular contact with you to ensure you are kept up to date with news from the University and Department. A member of staff will also visit you during your placement, or arrange a conference/skype call if you are placed outside of the UK.

You must:

- Ensure that you are in contact with the Faculty Placements Manager. The Faculty Placements Manager will be your first line of support if you have difficulties in your placement, and will provide some of the assessment of your placement experience;
- Check, through the Faculty Placements Manager, that you are fulfilling the assessment requirements of the placement;
- Check, through the Faculty Placements Manager, that you are being given the opportunity to gain appropriate experience whilst on your placement.

You are responsible for

- Working to the best of your ability on the tasks your employer gives to you;
- Conducting yourself in a professional manner in your work activities;
- Maintaining contact with the University and Department throughout your placement by the provision of up-to-date address, phone-number and email information to the placements office and by promptly responding to email and written mail contacts from the University;
- Identifying and discussing with your employer any additional training or equipment requirements that will enable you to complete your job to the best of your ability;
- Satisfying the Health and Safety requirements of the University;

- Completing the assessment requirements of the placement (completing a personal objectives and learning outcome plan (POLO forms); producing a placement report at the end of your placement experience; presenting your placement experience to staff and students on your return);
- Ensuring employer reports (GOLF- Goal Objectives and Learning Forms) are completed;
- Contacting the Faculty Placements Manager as soon as possible if problems arise within the placement.

Assessment of your placement

The placement is monitored and/or assessed through four mechanisms:

POLO Forms – You are required to complete a personal objectives and learning outcomes plan for your placement year. The POLO forms for part of your formal Placement Report. You are required to complete an initial POLO (Personal Objectives and Learning Outcomes) form at the end of your first month on placement. This must include a clear descriptive overview of your role and responsibilities, including the area/department you work in and the function of the section within the organization, as this will act as the introduction to your placement report.

At the end of your placement you must complete the POLO final form. These forms must provide clear concise descriptions of your activities, and reflection on your personal development aims and experience gained. These will form the second part of your formal placement report.

Evaluation reports - Your employer will complete a quarterly report (GOLF- Goal Objectives and Learning Forms), which is sent back to the University. This will allow the employer to identify any areas which need development. Your employer will use this as an opportunity to provide you with additional feedback. We will use this report as a guide to how well you are settling into your placement and how well you are fulfilling the responsibilities you have been given. Any areas of concern will be raised with your Visiting Tutor who may visit a student more regularly in cases where problems exist.

Placement report - You will produce this document at the end of your placement. This is a self-evaluation of your placement experience. The report will be read and assessed by The Director of Studies for Placements, who will also give you feedback on your report writing skills.

Poster Presentation - You will present the details of your report to staff and other placement students on your return to the University. This is an opportunity to design and produce a scientific/professional poster, as well as an excellent social occasion when those who have been on placement can share their experiences and meet up together after a year apart.

In considering whether a student has passed the placement experience the Placement Staff will consider whether they have completed the required placement term, have produced work which has satisfied the employer, and have satisfied the assessment requirements of the placement (Employer evaluations (GOLF), POLO forms, Report and Poster Presentation).

Study Year Abroad

Those students on the 'Study Year Abroad' programmes are eligible to attend a European University to study Computer Science for a year within another institution and within another culture. This is a highly enriching experience, and the Department wholeheartedly supports those who wish to avail themselves of this opportunity. It is an appropriate route for those with good language skills. You may normally only attend institutions with which the Department has established exchange agreements under the EU's Erasmus programme.

If you are on the Study Year Abroad route, or would like to transfer to this route, you should talk to the Department's Overseas Studies and International Students Tutor.

Assessment of overseas study

During your overseas study period you will be expected to undertake the assessments for the units you study. You will be assessed under the regulations of the institute you are attending and the results, expressed in the European Credit Transfer System, then contribute towards your degree award.

Summer placements

Students who are not on a placements route should seek to obtain work experience through appropriate summer employment. Most employers require some work experience as a pre-requisite to graduate employment. To enable you to find suitable work experience (i.e. work experience within the IT industry) the University Careers Service maintains a website listing summer work opportunities. This can be found on My Future.

Further information

University Placement Handbook / information for placement students:
www.bath.ac.uk/internal/placements/information-for-students.bho/index.html

Coursework and Assessment

Setting coursework

Where a unit is assessed in part or whole through coursework assessment, the Unit lecturer is responsible for the setting of appropriate coursework. The coursework will be set so that the predicted effort required by a competent and diligent student is appropriate to the weighting of the coursework component of the total assessment of the unit. For units with 30% coursework assessment this will typically be 12 to 15 hours of effort. Some students will find that they need to put in additional study time in order to complete the assessment, whilst others will complete the assessment in less time.

A Unit Lecturer may decide to divide the coursework into many parts. Normally the Coursework Specification will identify, for each part, the effort required to complete that part and the estimated time required to complete the whole assessment. The Unit Lecturer may also require a "*final coursework submission*" in which the work of the various parts is gathered and submitted as a whole by a specified deadline.

The Director of Teaching will examine the overall burden of the assessed coursework and ensure that the submission timetable across all the assessed coursework is appropriate.

Assessed coursework

Coursework will normally identify the following:

- The date on which the coursework is to be handed out to students;

- The deadline date and time for the submission of completed coursework;

- The location and form of coursework submission;

- The proportion of the total coursework assessment that the coursework represents (if it is part of a multi-part coursework assessment);

- The conditions under which the coursework is to be attempted; for example, whether it is a group coursework (and the size of the group) or individual; whether the coursework is to be completed within tutorial or lab sessions or within the student's own study time; whether tutors, other lecturers or other students may be consulted;

- An identification of the Learning Outcomes for the Unit that are being assessed by the coursework (where this is not otherwise identified within the Unit Specification);

- A statement of the deliverables that constitute the expected coursework submission;

- A statement of the requirements necessary to achieve a mark which achieves a performance within stated mark or threshold boundaries; for example, in the 1st class, 2:1, 2:2 and 3rd class categories or (where more appropriate) a breakdown of the allocation of marks to appropriate components of the coursework assessment;

- A detailed and unambiguous specification of the problem to be tackled or the work required to complete the assessment.

Hand-out

All coursework is "set" (made available to students) by the Unit Lecturer within a lecture session or by the Unit Tutors within unit tutorials. Additional copies of a coursework specification are usually available through the Department Office.

> Note: In the case of illness, it is the student's responsibility to check at the earliest opportunity for coursework that has been set and to obtain the corresponding coursework specification.

Apart from the case of illness, no student should be in a position to miss the setting of coursework for a unit and such a circumstance is not a permitted reason for a coursework deadline extension.

Working on your coursework

The time between the setting of coursework and the coursework submission deadline will be sufficient to complete the coursework within the additional study time allocated to each unit. You should therefore arrange your time away from timetabled classes carefully so that you are able to allocate the appropriate amount of time to each piece of coursework.

It is important *not* to leave the completion or the printout of your coursework submission until the last day. It is *very* common for there to be long print queues at coursework submission time and you should allow for possible mechanical breakdown or other causes of delay. All students are required to take this into account when allocating time to their coursework.

> Note: It is the student's responsibility to ensure that regular back-up copies of their coursework are made. Electronic or mechanical failure of computer equipment or loss of data are not acceptable grounds for a coursework deadline extension.

Whilst every effort will be made to reduce the build-up of workload in the coursework assessment period, it is inevitable that much of the coursework load will occur towards the end of each semester. Students are expected to manage their time carefully to balance the workload across the coursework assessment period.

> Note: The level of workload is not normally a permitted reason for an application for a coursework deadline extension.

In the rare cases where it becomes clear that the workload requirements of a coursework have been underestimated the Director of Teaching, in consultation with the Unit Lecturer, may agree to a modification to the coursework to reduce the workload requirements. This is the only modification that is allowed to a coursework specification once the coursework has been set. Any such modification will be announced in the next lecture class for the unit and published through a notice on the student notice boards within the Computer Science Department.

Group coursework

Most coursework that is set is *individual* coursework. In this case no student may share information on the completion of their coursework that may breach the regulations on Plagiarism and Cheating.

> Note: Submitting work that is substantially similar to that of another student or that merely regurgitates the content of a textbook is highly likely to result in the accusation of cheating and may lead to severe penalties.

Where the coursework allows, you may consult tutors and lecturers for additional help and guidance but you must *always* acknowledge such help and the extent of any material used verbatim.

Some coursework is designated as *group* coursework. In such cases the Unit Lecturer will identify the required group size within the coursework specification and will manage the establishment of appropriate groups. Once a group is identified, the ability to work as a group towards the common goals set in the coursework specification is a key component of the assessment.

The allocation of workload between group members in a fair manner, the management of the individual deliverables and their integration, and the resolution of personal differences within the group are key to the success of the coursework. It is the group's responsibility to ensure the success of the group coursework through the full commitment of each member of the group. Where a group member does not satisfactorily complete the workload that has been previously allocated, the group members *must* raise the problem with the Unit Lecturer at an early stage. The Unit Lecturer will seek an appropriate resolution of the problem. Normally the coursework specification will identify the actions to be taken in the event of an unequal contribution of work to the group effort and how the matter will be resolved in the final allocation of marks to members of the group.

Within group coursework, no group has the right to exclude the work of one or more members from the submitted work of the group. Any attempt to prevent an individual from participating in the work of the group will normally lead to a considerable reduction in the marks allocated to the assessment of the group coursework as a whole.

Coursework submission

In general you will be required to submit coursework either in hard copy or electronically via Moodle. The unit lecturer will always make it clear how, when and in what format work should be submitted and if you have any queries you should contact them. You cannot submit work electronically (e.g. by email) unless you are specifically asked to do so as part of the submission.

Coursework that is submitted in hard copy must be submitted via the Hand-in Pigeonholes by the deadline identified on the coursework specification. *When submitting coursework all students are required to complete both sections of the Coursework Submission Form*. Copies of this form can be obtained from on top of the pigeonholes or from the Department Office. The completed form must be bound securely into the coursework submission as the first page of the coursework. This form is used to ensure that all coursework has all the required details to correctly identify the coursework to the student(s) who submitted it, and to provide a record of which students submitted coursework in each unit. Secure hand-in boxes are located at the bottom of the stairs on level 2 in the Department of Computer Science and you should put your work in the correct box.

No coursework will be accepted that is not submitted securely bound. The only binding which is acceptable are forms of binding that allow all the content of each page to be read without having to remove any pages from the binding. Sections of coursework that are inappropriately bound may not be marked.

All submissions that are asked for in hard copy *must* be printed or in legible hand-written form - submission of part or all of the coursework on computer disk, CD-ROM, DVD or any other electronic or magnetic storage media is not acceptable unless specified as part of the coursework submission. *Submission by email is not acceptable at any time*. If you are unable to be present within the Department to submit your coursework, you may submit the coursework by surface mail. Any coursework submitted in this manner must normally be posted in time to arrive by the deadline date, and should always be post-marked before the deadline for coursework submission. You are responsible for ensuring that any coursework submitted by mail is delivered safely and on time, by using a recorded delivery or courier service if appropriate.

You are *required* to retain a copy of any coursework that you have submitted. Most coursework is retained for scrutiny by internal and external examiners as a part of the quality assurance processes of the Department. In the rare case where a student may claim that a coursework was submitted and our submission records indicate that this was the case but no coursework has been marked for that student, the student will be required to produce the second copy for marking. Failure to submit a second copy on request may result in the award of zero for that coursework. Any coursework

submitted by post that is not received will be deemed to have not been submitted and will normally be awarded a mark of zero unless you can produce formal proof of postage and you are able to provide a copy of the coursework immediately on request.

Coursework marking

In large units coursework is normally marked by the Unit Tutors - the Unit Lecturer will then act as a moderator to ensure that no marking bias is evident from one Tutor to another. Marking will be in accordance with a marking scheme which will reflect the mark allocation guidelines provided to students in the coursework specification. A representative sample of coursework is identified by each Unit Lecturer and is made available to the Checker who will check that the marking has been conducted in accordance with the marking scheme. The Checker will also ensure that the level of feedback provided to the students is appropriate and that the mark on each coursework submission has been transcribed correctly to the marks list.

Once the Programme Administrator has entered the marks into the marks database the Unit Lecturer checks the entered marks for accuracy. Marking is normally required to be completed by at most three semester weeks following coursework submission, allowing for vacation periods, although the Director of Teaching may permit an extension to this time.

Coursework feedback

Although summative coursework assessment is primarily to demonstrate that students have satisfied some or all of the learning objectives of the unit and to provide a measure of the academic achievement of the student within the unit, assessed coursework also provides valuable feedback for the student. All Unit Lecturers are required to provide appropriate written feedback on assessed coursework and an opportunity for individual feedback upon request.

Some Unit Lecturers will decide to provide feedback through written comments on the coursework submission. In this case the Unit Lecturers will hand back all the coursework to the students for feedback purposes, and a photocopied representative sample of the coursework will be retained for quality assurance purposes. Where a Unit Lecturer opts to provide feedback using a separate feedback sheet, all the coursework will be retained and a copy of the feedback sheets will be returned to the students. Students will then be expected to consult their additional copy of the coursework alongside the feedback sheet in order to identify any problem areas. Some Unit Lecturers or Unit Tutors may decide to provide verbal feedback within lectures, tutorials or other appropriate classes.

Board of Examiners for Units

The Boards of Examiners for Units consist of all the Unit Leaders for all units being examined for a particular year of the programme, with one board for each year. The Unit Boards receive listings of all the marks within each unit (including coursework and examination marks) in rank order and a variety of summary statistics to highlight the comparative performance of quartiles, and the pass and failure rates.

In the rare cases where the results of a unit are very low or high or where the comparative performance of students on a unit is considerably out of line with the performance on other units and where there is evidence that the bias is due to a poorly calibrated examination or coursework assessment, the Unit Board may decide to scale the marks to compensate for the problem.

Board of Examiners for Programmes

The Boards of Examiners for Programmes consists of an identified set of senior academic members of the Department, and, for the final year Programme Board, the External Examiner will also be

present. Programme Boards are presented with the unit marks for each unit that the student has taken during the year, together with the credit-weighted average for the year. In the final year the computed mark required to decide the degree classification and the second year credit-weighted average is also included.

This information is used to decide whether first and second year students may proceed, and to decide whether any additional work is required in order to gain credit in a failed unit. For final year students this information is used to decide the classification of the degree and any condonement of credit that might be required.

Where a student has individual mitigating circumstances that have been requested in writing for the Board to consider, the Director of Teaching presents relevant details of these circumstances to the board, ensuring that anonymity and, where necessary, confidentiality is maintained. The Board will then consider the evidence and the student's performance before, after and during the circumstances to ascertain if there has been any effect on performance. Where performance has been affected, the Board will use its academic judgement to deliver a decision, within the regulations of the university, which best reflects the normal academic abilities of the student.

All Programme Board decisions on progression or the award of degree classifications are recommendations. At the end of the academic year the Faculty Board of Studies considers these recommendations. The Faculty Board of Studies will scrutinise the recommendations and will approve or reject them. Once the faculty Board of Studies has approved the results, they are published to students.

Results are made available electronically through the student record system SAMIS. *No results are communicated over the telephone.*

Examinations

Examinations take place at the end of each semester as shown in the Academic Calendar (see inside front cover). Units with a CM code within degree programmes of the Department of Computer Science will have examinations that will be of 2 hours duration.

For Level 1 and 2 units, papers set by the Department of Computer Science will normally contain five questions. Students will normally be required to answer three questions. For examinations on Level 3 units the papers set by the Department of Computer Science will normally contain four questions. Students will normally be required to answer three questions. Students will be informed of any deviation to this format by the relevant unit leader.

For the rules governing examinations set by other Departments students should consult the Department in question.

Preparing for exams
Before the examination period in each semester, you will be informed of the standard rubric for the examinations. This will enable you to prepare yourself for the normal examination content. Any

examinations that do not conform to this rubric will be clearly identified by the Unit Lecturer within the classes for that unit.

Exam setting

Examinations are written by the Unit Lecturer. When writing an examination paper the Unit Lecturer will indicate the breakdown of marks within each question on the paper and will produce a detailed marking scheme or model answer. The marking scheme/model answer is used by the Unit Lecturer to ensure that the exam is of the right level of difficulty and does not require more time to answer than is available within the examination.

All examination papers are then passed to the Checker, who gives an independent assessment of the level, coverage and fairness of the paper, who checks that the model answers are correct and the marking scheme appropriate, and who checks that the allocation of marks is correct. Any problems with the paper are identified and the Unit Lecturer is then asked to address these problems. The Examination Papers for all second and final year examinations that contribute to a degree classification decision are then sent to the External Examiner who will also check and comment on the papers. The Unit Lecturer will also be asked to address any issues raised by the External Examiner.

In order to distinguish between students capable of a 2:1 performance and those capable of a first class performance, each examination paper will normally contain sections where the student will have to demonstrate the application of knowledge gained to problems which are beyond those presented within the unit, demonstrate the assimilation of knowledge from many areas of the unit curriculum, and/or demonstrate the ability to consider and evaluate alternative approaches or solutions. You may therefore find parts of questions on the examination paper which are much more difficult to answer. *You should always attempt these parts of the question and answer these to the best of your ability. You will forfeit many potential marks if you decide not to address what appears to be a more difficult part of an examination question*.

Exam timetable

The Examination Timetable is set by the University Examinations Office and will be published on-line typically three to four weeks before the examinations. You will have access to your personal examination timetable via SAMIS-on-the-web. It will contain the date, time, location and seat number for each exam.

Candidate numbers

Each student is examined *anonymously*. Your candidate number will be made available to you via SAMIS. The candidate number will appear on stickers provided in the examination room for each exam. When you sit an exam you will write your name under a flap on the corner of the examination script, and will seal the flap down using the sticker.

When the marker assesses the exam scripts, the marker only sees your candidate number. The candidate number is used throughout the examination process, including consideration of students within Examination Boards. This ensures that all students are treated equitably at all stages.

Due to the large size of some units, some examinations will need to be split among a number of locations. Furthermore, those students who have been assessed as requiring special examination arrangements will normally sit examinations in a different location from other students. *It is your responsibility to record accurately these details and for ensuring that you attend each examination at the correct time and in the correct venue*.

> Note: An examination cannot normally be arranged for a student who fails to arrive at the correct venue at the time specified. It is your responsibility to report to the Undergraduate Programmes Administrator if there is no entry for an examination you expect to sit or if you are entered for the wrong examination.

Special examination arrangements

Some students, because of injury or illness, may need alternative examination arrangements. In order for these arrangements to be made it is the student's responsibility to ensure that they make an appointment with Student Disability Advice Team well before the commencement of the examination period go.bath.ac.uk/htb8. Advisors will conduct an assessment of your needs and recommend appropriate alternative assessment arrangements. To ensure that arrangements are in place for the examination you should normally arrange to be assessed at least four weeks before the examination period begins.

Calculators and dictionaries

The University carries its own supply of calculators and in examinations requiring calculators the normal practice for units with a CM code will be that calculators will be supplied. In this case the examination paper will carry the additional rubric:

"Candidates may use University-supplied calculators"

If calculators are not required the additional rubric will be:

"No calculators may be brought in and used"

In either case, students must *not* take their own calculators into the examination room. Any student in possession of their own calculator will be asked to leave it with their other possessions at the front or rear of the examination room.

Foreign language dictionaries are not supplied, and if required these must be approved by the Undergraduate Programmes Administrator several weeks before the examination period commences. Only those dictionaries that are approved by the Undergraduate Programmes Administrator may be used. Electronic dictionaries are not permitted. No additional written material may appear within a dictionary that is used in an examination.

Failure to abide by these guidelines may lead to the accusation of cheating within an examination, and will certainly cause the examination invigilators to require you to set aside and not use the dictionary within the examination.

Although these rules reflect University guidelines, some departments adopt different rules. For examinations set by other departments students should seek guidance from the Department Office of the Department in question.

In the exam

Before starting your examination you should have deposited any personal belongings that are not required for the examination at the front or rear of the exam hall, or as indicated by the invigilator. You will need to find the allocated seat for each exam. For this reason you *must* know your *candidate number* and you will need to use it to look for your seat within the examination. When you find your seat you should also find an attendance slip on the desk - this will have your name printed on them.

After being seated you should immediately sign the attendance part of the slip. You should also write your name and other requested details on the front of each white separate examination booklet, or on the front of the pink examination script cover (as appropriate). You should stick down the flap of each booklet/script cover so as to ensure anonymity in marking.

You should *always* take care to read the examination rubric on the front of the examination paper before you start the examination. Note how many questions you are required to answer, and use this to allocate an appropriate division of the examination time to each question.

The Chief Invigilator will remind you of the main examination regulations before the examination starts, and then will clearly indicate the start of the examination. You are then free to start your written answers to the question paper.

If, during the examination, you wish to obtain more stationery, gain access to additional pens or pencils, or ask a procedural question about the examination you should attract the attention of an invigilator by raising your hand. The invigilator will come to see you and you can make a request to the invigilator. *The invigilator's decision on any matter is final - there is no opportunity to debate a decision within the examination room.*

If you need to leave the examination room due to ill health or any other matter, you should attract the attention of an invigilator by raising your hand. The invigilator will make arrangements for you to leave with an attendant where appropriate. You will only be permitted to re-enter an examination if the examination conditions have been maintained for all of the time you have been out of the examination room. No additional time can be provided for time outside of the examination room - you should use the Mitigating Circumstances regulations to deal with any loss of time. *The Chief Invigilator's decision on whether you are able to re-enter the examination is final - there is no opportunity to debate the decision within the examination room.*

Whilst undertaking an examination, the examination regulations of the University apply. You should ensure that you are familiar with them before the examinations period, and that you abide by the regulations throughout the examination period

Finishing the exam

The rubric will clearly state how many questions should be answered and whether there are any compulsory questions. If you opt to answer more than the specified number of questions you should clearly identify which of your answers you wish to have marked. In cases where you have failed to identify the correct number of answers to be considered *the marker is only obliged to consider the answers in the order they appear* up to the number of answers required.

Where possible, before you finish the examination you should check to ensure that you have answered each question you have attempted as adequately as you are able. You should ensure that you have not missed out any parts of the questions you have attempted, and should read through your answers to make sure that the answer is clear and unambiguous. If you have left something out of your answer, add in the additional information and clearly indicate where it should be considered within your answer.

Before you hand in your exam work, ensure that all pieces of paper that you wish to have assessed are bound securely together and your candidate number and other requested details are filled in on each script. *The Department cannot be held responsible for the loss of exam scripts or parts of scripts which have not been securely bound or which do not contain the details requested of the candidate.*

You will not be allowed to leave the examination room in the first 30 or last 15 minutes of the examination. If you do wish to leave the examination room between these times you should raise

your hand until an invigilator comes to you and then tell the invigilator that you are finishing your examination. The examination script(s) will be collected and you will then be permitted to leave. You will not be allowed to re-enter the examination room after that point. If you find that you have finished the examination early, it is highly likely that you have not answered the examinations questions sufficiently thoroughly to satisfy the marking scheme. Rather than leave early, you should take time to work through the questions and answers again to ensure that you have addressed the questions properly and answered as fully as you are able.

Marking
Examinations are normally marked by the Unit Lecturer, although large examinations may be marked by a number of tutors with the Unit Lecturer moderating the marking to prevent the occurrence of marking differences between tutors. Marking is always guided by the marking scheme for the examination, and will be conducted in such a way that the marking can be checked as a part of the quality assurance procedures within the Department.

A sample of marked examination scripts are checked by the Checker to ensure that the marker has adequately followed the marking scheme. The marks entered on the front of all scripts are checked to ensure that the marks have been correctly transcribed from the body of the script, and to check that the marks have been correctly totalled and transcribed to the submitted mark list. After the Programme Administrator has entered the marks into the marks database, all entered marks are checked by the Unit Lecturer to ensure transcription errors have not occurred. The External Examiner is provided with the opportunity to examine a sample of the examination scripts for every unit that contributes towards the degree classification for a programme.

Exam boards
There are two forms of examination board - the *Board of Examiners for Units* and the *Board of Examiners for Programmes*. In all examination boards within the Department the Department maintains the anonymity of the students being considered by using the candidate numbers to refer to the students. Unit boards conducted for units that are provided by other departments may not preserve anonymity at this stage.

Prizes and Awards

The University's **Mary Tasker Award** is awarded annually to a member of the university's academic staff in recognition of excellence in teaching. Students are invited to nominate any of their lecturers for this award.

The **Chancellor's Prize** is open to all undergraduate and postgraduate students. Nominees should have demonstrated academic excellence together with a contribution to the life, academic reputations and general work of the university.

Computer Science Awards

Within the Department of Computer Science the following prizes are currently available:

Nigel J Day Prize in Computing
Nigel J Day was an undergraduate in the then School of Mathematical Sciences who graduated in 1987. He was then employed as a Research Officer in the School until his death in 1988. His parents Mr and Mrs N Day have endowed a sum of money to provide this annual prize. The prize is awarded to that final-year undergraduate student, if any, who has demonstrated outstanding achievement in the practical aspects of computing, as shown in project and assignment work during their final year.

The award of the prize is determined by a committee consisting of the External and Internal examiners under the chairmanship of the Head of Department.

Computing Group Prize

This prize was established in 1985 by the Computing Group of the then School of Mathematical Sciences. The prize is awarded, on the basis of performance in the final year Computer Science units, to that undergraduate student (if any) who has shown outstanding ability in computing. The award of the prize is determined by a committee comprising the internal and external examiners under the chairmanship of the Head of Department.

Department of Computer Science Prize for Contribution to the Life and Reputation of the Department

This prize was established in 2002 by the Department of Computer Science. The prize is awarded to the final year undergraduate student who has, throughout their time within the Department, made an outstanding contribution to the development of the Department and its reputation within the University, nationally or internationally. The award of the prize is determined by a committee consisting of the External and Internal Examiners under the chairmanship of the Head of Department.

The Netcraft Prize

Netcraft, a local internet services company, donates various prizes to high scoring Year 1 students (as measured by their performance in the computing units).

Unit and Programme Changes

We continually look for ways to develop and improve our programmes. For example:

- it might be desirable to make some updates to content to reflect the latest developments in a particular field of study
- a review of assessments across a programme (including feedback received) might identify that changes to a unit assessment would better support student learning.

Students who would be affected by proposed changes are consulted about them, either via their Staff/Student Liaison Committee or directly, depending on the nature of the change.

In addition, it is sometimes necessary to make changes due to unforeseen or unavoidable circumstances. For example:

- the accrediting body for a programme may require changes to be made to it
- it may not be possible to run a particular unit because a member of teaching staff with specialist expertise leaves the University and we are unable to find a suitable replacement
- it may not be viable to run a particular optional unit in a given year because very few students select it.

In such cases, the University will always try to ensure that any impact on students is minimised and that students are informed of the changes at the earliest opportunity.

All programme and unit changes are managed through a formal process set out by the University. The aim of this is to ensure that changes are academically appropriate and properly supported, take place in a timely manner, and safeguard the interests of students.

How Your Programme is Reviewed and Monitored

The University has a number of mechanisms for ensuring that programmes remain up-to-date, issues are dealt with and improvements made.

All programmes and units are monitored annually, looking at what is working well and identifying any actions that need to be taken. Student feedback, including feedback given through unit evaluation and other student surveys, is a key part of unit and programme monitoring.

Departments also conduct periodic reviews of their programmes. These provide an opportunity for in-depth review and development, involving input from students and from an adviser(s) external to the University.

Study and Support: Getting the Most Out of Your Studies

Accessing university email

You will need to use your unique username and password to access your University email account. You are able to access your email by going to http://mail.bath.ac.uk

Your username also forms your email address (username@bath.ac.uk).

The University will often communicate with you about a range of important matters including registration, unit enrolment, assessment, degree ceremonies, and matters such as tuition fees, via your University email account. So that you do not miss out on (and as a consequence fail to act on) important information, it is a University requirement (Regulation 1.3) that you access your University email account regularly, even if you are out on placement or study abroad.

You therefore have a responsibility to ensure that your University email account can receive incoming mail and that you read your email regularly.

Further information

Email guidance: www.bath.ac.uk/bucs/email
Regulation 1.3: www.bath.ac.uk/regulations/Regulation1.pdf

SAMIS

SAMIS is the University's student records database. It provides an online portal where you can view details about your registration, update your contact details, and do other things such as viewing exam information, viewing your confirmed assessment results, and (where applicable) choosing optional units.

Further information

www.bath.ac.uk/samis

Moodle

Moodle is the Virtual Learning Environment (VLE) used at the University of Bath. It is used by academic Departments to support learning and teaching at programme and unit level. It provides a platform for the delivery of resources and online activities, and can also support student interaction and collaboration.
moodle.bath.ac.uk/enrol/index.php?id=1358

Personal Tutor System

On entry to the University, you will be assigned a Personal Tutor who will help you to get the best out of your university experience. Your Personal Tutor will:

- support you in your academic progress and personal development
- discuss with you programme choices, placement opportunities and future career plans
- provide you with a reference for your placement or career
- guide you to sources of expert help with any personal/welfare issues.

You should expect to meet with your Personal Tutor on at least three occasions in your first semester at the University and at least once per semester thereafter. This enables you both to get to know each other, such that you can raise any issues with your tutor and your tutor can support you fully through your programme. It is important that you attend scheduled meetings with your Personal Tutor and let them know in advance if you cannot attend. Many of these meetings may be in small groups but you can also request a personal, one-to-one meeting at any time.

If you should have reason to wish to change your Personal Tutor please contact your Director of Studies to discuss the matter.

Further information

www.bath.ac.uk/students/support/academic/personal-tutors

Academic Skills Support and Development

To help you get the best out of your studies and your future employability, we offer all our students a comprehensive range of free, year-round skills and personal development opportunities designed to complement your academic programme.

These opportunities have been designed to give you choice and flexibility to help you get the support and development you need at the time you most need it. You can choose from classes, tutorials, drop-in sessions, workshops and online resources to develop your academic skills, for example to:

- create well-written, clearly structured essays, reports and dissertations
- think critically in order to enhance your writing
- manage information sources and literature effectively
- give polished and effective academic presentations
- manage and analyse numbers, data and statistics
- enhance your existing language proficiency, or learn a new language
- use IT tools and resources effectively.

There are many other opportunities also available to you through our Careers Service and Students' Union to help you develop your skills and prepare for the workplace. For example:

- writing an effective job application and CV
- succeeding at interview or assessment centre
- leading and managing projects
- chairing meetings
- running a club or society.

Further information

Find out more about the skills support and development opportunities available here:
http://go.bath.ac.uk/skills

Recognition for extra-curricular activities: The Bath Award

The Bath Award recognises and accredits the skills and achievements of students engaged in all types of extra-curricular activities. It operates alongside your degree programme and aims to capture the extra-curricular achievements at University that you will find valuable in your future life and career.

Further information

thesubath.com/bathaward

The Library

The Library is open 24 hours a day and provides print and electronic materials and information services to support study and research across the University. It houses over 520 PCs, wireless networking throughout, and provides areas for both quiet individual study and group work. Alongside 340,000 printed books, it offers over 22,000 electronic journals, 425,000 electronic books, 90 databases and digital versions of the University's academic publications, all available across the University and beyond. The Library's copy and print service includes black and white and colour photocopying, laser printing and scanning.

Information specialists, known as Subject Librarians (see the Department's library resources page below), are responsible for services to individual Departments/the School. They provide individual help to students and staff, as well as teaching information skills in Department and School programmes and through general University skills provision. All new students receive library introduction sessions during the induction period.

Further Information

This Department's Library resources page is www.bath.ac.uk/library/subjects/comp-sci/
Our subject Librarian is Emma Stuart Edwards e.stuartedwards@bath.ac.uk
For information on all library resources, please see www.bath.ac.uk/library/

Computing facilities and IT skills

With your username and password, you will be able to access one of over 1,000 workstations across campus. These enable you to use email, the internet, file storage, Office applications such as Word and Excel, and often give access to the more complex software used on your programme. All computers print to photocopiers in the Library and around the campus, for which there is a charge per page.

With your username and password you can also register your own laptop, smartphone or tablet for connection to the campus wireless network (which covers spaces such as communal areas, the Library and cafés) or to around 150 student docking ports. You can use your own device to access many University applications using a service called UniDesk. Find out more about this at: http://go.bath.ac.uk/unidesk

Support is available from the IT Service Desk on Level 2 of the Library or online at: www.bath.ac.uk/computing-services

Tutorials and Frequently Asked Questions (FAQs) are provided in the help section.

If you have a disability or require learning assistance, Computing Services can support you with your computing needs. An Assistive Technologist is available to provide advice and support. Additional resources available include a purpose-built room, specialist software and computer hardware - including laptops for loan.

The IT shop in the Library stocks popular products such as academic software, DVDs, network cables and headsets. You can order many further IT products through the shop. Prices are often lower than in high street shops.

You can also borrow technology from the Service Desk in support of your studies, for example audio recorders, video cameras and projectors.

> *Further information*
>
> Computing Services: www.bath.ac.uk/computing-services
> Information for new users: http://go.bath.ac.uk/newusers
> Information for users with a disability or learning difficulty: http://go.bath.ac.uk/assistive-technologies
> IT shop: http://go.bath.ac.uk/ITshop
> Computing Services Twitter Feed: @UniofBathIT

Computer laboratory time

Many units in your first year of studies will have been allocated computer laboratory time. It is important that you use this - you cannot learn a programming language or technique by bookwork alone, any more than you would expect to be able to learn to ride a bicycle or drive a car by reading a book. Learning to program, either for the first time or when learning a language that is based on a different programming paradigm, requires lots of practice. Sometimes it can appear that you are just not picking up the required skills after a long period of work, but most practitioners find that programming skills seem to suddenly ''click''. The time it takes for this to happen varies between people - you will just have to persevere. If you fail to attend laboratory classes and utilise the time made available to you to pick up these skills it is unlikely that your tutors or academic staff will be prepared to give you more of their time to help you.

If you are entering your second or final year of studies you will find that some units do not have any allocated computer laboratory time, and yet require you to learn a new programming language reflecting a new programming paradigm. This does *not* mean that you do not need to put in time on a computer to learn to programme using the new paradigm - in fact learning a new programming paradigm is much more than just learning another programming language, it is like learning to program all over again. We do not allocate lab time because you should now be able to work and learn without the supervision of a tutor. You should therefore ensure that you use the study time of the unit to complete the exercises set within your lecture and tutorial notes and available within the set text books. Failure to utilise your study time to gain practice and experience in the language will inevitably lead to poor performance when you come to attempt the assessed coursework for the unit.

The Department has its own computer laboratory, 1W 3.56, which is a dedicated lab for undergraduate students. The lab is also used in the teaching of certain units.

This Laboratory is *your space*: use it cleanly and tidily. Do **not** attempt to reserve computers for yourself or others. If the Laboratory is misused, the Department will have to restrict access to it, to the detriment of all. Note that the Laboratory may be booked for particular units.

Recording of Lectures

'Lecture capture' technology is widely used on campus to record lectures. Lecturers on your units will inform you if lectures will be recorded and the recordings made available for you to view again online. Where provided, lecture recordings are made available as an additional resource for personal study and revision purposes, and you can pause and rewind recordings when you re-watch them. The University cannot guarantee recordings (for example in the event of a technical fault) and recordings are not made available indefinitely.

As set out in Ordinance 22.4, students are not permitted to copy or redistribute lecture recordings, or to make their own recordings of lectures. However, the University may permit students with a disability to record lectures where this is a reasonable adjustment under the provisions of the Equality Act, in order to give these students equal access to educational opportunities. In such circumstances the lecturer will be informed that the lecture is being recorded and the student may use the recording for their own personal study purposes only. Students with a disability should contact the Disability Service for further advice.

Further information
Ordinance 22: www.bath.ac.uk/ordinances/22.pdf
Disability Service: www.bath.ac.uk/groups/disability-service

Student Representation

Feeding back your views to the University

The University is committed to reviewing and continually improving its practice. The main ways in which we seek feedback are through:

a) Staff / Student Liaison Committees (SSLCs)

b) surveys

c) the Students' Union.

We also use focus groups, Departmental working parties, and various kinds of feedback session.

You can get actively involved in determining how your educational and student experiences are organised by becoming active in the Students' Union or by letting your Department know that you are interested in contributing.

Every Department has a formal system so that all students can comment routinely, in confidence and anonymously on the learning experience they have received. Such comments help us to check that:

- you have a clear idea of the aims and requirements of each unit you study
- our teaching is effective and stimulating
- the advice and feedback we provide on your work is helpful
- our resources are suitable.

You will be asked to complete a short online unit evaluation for units you have studied. You will also be asked to complete surveys periodically on your experience of the programme as a whole.

Please complete each evaluation fully, thoughtfully, and candidly. In particular, please tell us not only your opinion but also the *reasons* behind your opinion.

When we receive responses to evaluations, we analyse them – especially the positive suggestions for change and concerns that are voiced. Student feedback and the resulting actions are taken into consideration in annual monitoring of units and programmes. Survey results are discussed at committees where student representatives have the opportunity to input to any action plans developed in response to the issues raised.

Your feedback is important to both the University and the Students' Union. Please keep telling us what is going well and what needs to get better. We will communicate how feedback on units and programmes, and the wider student experience, has been acted upon.

Student representatives

As a student of the University you are automatically a member of the Students' Union (although you have a right to opt out - see section below on **Students' Union membership**). Officers of the Students' Union represent students' interests on University decision-making bodies. In addition, numerous elected student representatives play important roles on various Departmental, Faculty/School and University committees. All student representatives are elected through online elections facilitated by the Students' Union.

There are many opportunities for elected student representatives. If you are elected to serve on Departmental, Faculty/School or University committees you will be expected to represent the views of your fellow students and provide feedback following meetings.

Student Representation on Committees

Departmental level:	Each Department has at least one Departmental Staff / Student Liaison Committee (SSLC). These comprise several elected student members, known as Academic Reps, and an equal or smaller number of staff members. Academic Reps are elected at the beginning of every year through online elections. Their role involves collecting the views of the students on their programme and attending SSLCs where they represent these views to their Department.
	Each SSLC produces an Annual Overview Report briefly outlining their work and highlighting good practice, the key themes explored and the actions that have been taken as a result. The Students' Union reviews all these reports and prepares a summary report for the University highlighting issues which need to be addressed by the institution as a whole.
	There is also provision for student membership of the Department Learning, Teaching and Quality Committee: normally one undergraduate and one postgraduate (taught) representative.
	Academic Reps attend Students' Union Academic Council meetings. These take place every three weeks during semester time in order to: • keep Students' Union Officers and fellow Academic Reps informed of academic developments throughout the University • discuss common problems and interests affecting Departments • gather student opinions and views to be used by the University and the Students' Union

	• update Academic Reps on key issues.
	Do feel free to approach your student Academic Reps at any time to inform them of good practice or areas for enhancement in your units and programme. This is normally the person who represents your year or degree scheme on the Departmental SSLC.
Faculty/ School level:	Student representatives are also elected as Faculty Reps to sit on a number of Faculty/School level committees such as the Faculty/School Board of Studies and the Faculty/School Learning, Teaching and Quality Committee. Faculty Reps are also members of the Students' Union Academic Exec Committee.
University level:	University committees with student representation include the Council/Senate/Students' Union, the University Learning, Teaching and Quality Committee, the Programmes and Partnerships Approval Committee, and Senate.

If you are interested in opportunities to represent student views, please contact the Students' Union: academicreps@bath.ac.uk

The Students' Union runs a full training programme for student representatives including an online course in Moodle, a conference and additional sessions through the Skills Training programme.

If you need to raise a concern, remember there are various routes open to you. You can discuss issues directly with a lecturer, your Personal Tutor, or the Director of Studies. Individual problems are often more readily resolved in this way. The Students' Union Advice and Support Service, described below, also provides students with information and confidential advice.

> *Further information*
>
> Your SSLC: moodle.bath.ac.uk/course/view.php?id=910
> Students' Union Academic Representation including contact details for Academic Reps: thesubath.com/academic
> Election of Academic Reps: thesubath.com/elections
> Students' Union Skills Training programme: thesubath.com/skills-training
> Outline election procedures are included in QA48 Student Engagement with Quality Assurance and Enhancement, Annex A: Staff/Student Liaison Committees:
> www.bath.ac.uk/quality/documents/QA48_Annex_A.pdf

Do feel free to approach your student Academic Reps at any time to inform them of good practice or areas for enhancement in your units and programme. This is normally the person who represents your year or degree scheme on the Departmental SSLC.
The Department of Computer Sciences has a strategic SSLC (see SSLC remit on the student Moodle site). That means it is not there to deal with "nitty gritty" day to day issues, such as lecture times clashes, or problems with seating or space. THOSE issues are best dealt with by the lecturer concerned, or the unit coordinator. The SSLC covers the bigger issues dealing with programmes of study and their development and progression. There will be online elections at the beginning of the year to elect both SSLC and faculty representatives.

Membership of the Computer Science Staff Student Liaison Committee
- Chair SSLC
- Secretary (in attendance)
- Directors of Teaching representatives
- Two other members of academic staff
- One student representative from each undergraduate programme; where a programme has over 50 students, normally one representative for each year of the programme
- One student representative for placement students
- One representative from Postgraduate Tutors
- Librarian for Computer Science (by invitation)
- Representative from Computing Services for teaching laboratories (by invitation)

Terms of Reference of the Computer Science Staff Student Liaison Committee

- To provide a forum for discussion between staff and students on matters relating to the Department in general and the courses in particular.
- To submit formal minutes to the Department Learning Teaching and Quality Committee and to make available these minutes to staff and students.
- To make recommendations to the Department Learning Teaching and Quality Committee on academic matters.
- To make recommendations to the Head of Department on matters affecting administration.
- To consider any matter referred to it by the Department Learning Teaching and Quality Committee or from the Faculty Board of Studies.
- To nominate the student members of the Department Learning Teaching and Quality Committee.

Students' Union Membership

All students registered with the University are automatically given membership of the Students' Union; however you have the right not to be a member. For further information on opting out of this membership, please go to the Code of Practice for the Students' Union: www.bath.ac.uk/university-secretary/guidance-policies/codeofpracticebusu.html

Student Support

Most students find there are occasions when it can help to talk to someone about a personal problem or issue. In many cases your Personal Tutor, Director of Studies, or Wellbeing Adviser (see the **Residential Life and Wellbeing Service** section below) will be able to help. However, sometimes more specialist help is needed. The University has a range of professional support services that you can approach directly. Your two main contact points are Student Services at the Roper Centre in 4 West and the Advice and Support Service in the Students' Union.

Student Services
Student Services can provide advice and support on a range of issues including:
- counselling and mental health

- disability issues
- money and funding
- residential life and wellbeing.

You can make an individual appointment or just pop in to our daily drop-in sessions.

Student Services can also provide letters confirming student status for a variety of purposes, which can be requested by logging on to SAMIS: www.bath.ac.uk/services/register-as-a-student-of-the-university-and-update-your-details

The Roper Student Services Centre in 4 West is open from 9.30am to 4.30pm throughout the year (tel: 01225 385538). Services are also available from the Virgil Building in Bath city centre.

For the full range of Student Services, see: http://go.bath.ac.uk/student-services or email: studentservices@bath.ac.uk

The Students' Union Advice and Support Service

The Students' Union Advice and Support Service provides information for students on a range of topics affecting their education and welfare, including advice for students wanting to submit Individual Mitigating Circumstances claims (see the section in this Handbook on **Assessment**), to change their programme, or experiencing problems with their programme. The staff in the Advice and Support Service also offer support, information and representation at academic appeals, academic misconduct and disciplinary hearings, and information and advice on a wide range of issues which affect students including housing and welfare issues.

The Students' Union Advice and Support Service is open Monday to Friday 9.00am to 5.00pm in term time (from 10.00am on Fridays) and 10.00am to 4.00pm during vacations (tel: 01225 386906, email: suadvice@bath.ac.uk)

The Advice and Support Service also supports the Diversity and Support groups – details of which can be found at: thesubath.com/diversity-support

The Students' Union webpage provides the facility for students to report incidents of harassment, discrimination or bullying. Incidents can be reported anonymously if preferred. Details of how to report an incident are available at: thesubath.com/report-an-incident

For the full range of services see: thesubath.com/support

Further information and contacts

A guide to the wide variety of support and information available to students can be found at: www.bath.ac.uk/student and the Students' Union website: thesubath.com

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Residential Life and Wellbeing Service

The University's professionally qualified Wellbeing Advisers provide a welfare and wellbeing service to all our students. You can talk to a Wellbeing Adviser about anything and we are also available evenings and weekends.

We hold daily drop-in sessions on campus, including weekends and University vacations. Drop-in sessions are also held at the Virgil Building in Bath city centre and we run activities during vacations for students who remain in Bath.

Advice for International Students

The Student Immigration Service provides a tailored pre-arrival and induction programme and advice and support for all international students, including a 'check and send' service if you need to send a Tier 4 visa application to the Home Office. The Service offers workshops, a drop-in service, advice via email, phone and web-based platforms, or individual appointments can be made through the Helpdesk in The Roper Student Services Centre, 4 West.

Further information

www.bath.ac.uk/visa

University-wide induction and welcome events are organised for incoming exchange students in the first week of each semester.

Further information

www.bath.ac.uk/campaigns/studying-at-bath-as-an-erasmus-exchange-or-visiting-student/

For students who join outside of the standard semester dates, induction and welcome events are organised by the relevant Department.

Dealing with a problem involving the University

We want to ensure that, if you have a problem concerning the University, it is resolved as quickly as possible. As described above, there are student representatives on all formal decision-making committees – at Departmental, Faculty/School and University level. Student representatives help to anticipate potential problems and, when problems occur, to raise them so that they can be dealt with promptly. As a result we can often resolve problems *before* they get to the stage where a formal complaint might be necessary.

The Students' Union offers advice for students on a range of issues through its Advice and Support Service. Its advice is independent of the University. See the section above on **Student Support.**

Complaints

If you do need to make a complaint, there are procedures in place to deal with it, outlined in the University's Student Complaints Procedure (see below).

These procedures are designed to ensure that your complaint will be dealt with in good faith and that you will not be penalised for complaining. When we receive a complaint, we will first seek to deal with it through informal discussion. If this fails to resolve the issue at hand, you can raise the complaint formally.

In addition, there are procedures for requesting a review of progression or award classification decisions, or of the level of attainment. For information on these procedures, please see the section in this Handbook on **Procedures for Academic Appeals**.

Further information

Student Complaints Procedure: www.bath.ac.uk/regulations/Appendix1.pdf

Bullying, harassment and victimisation
We believe that all our students and employees are entitled to be treated with dignity and respect and to be free from unlawful discrimination, victimisation, bullying, or any form of harassment.

This is set out in the University's policy, Dignity and Respect for Students and Staff of the University of Bath: Policy and Procedure for Dealing with Complaints (below).
This policy and procedure applies to all staff, students and third parties (e.g. contractors to the University).

Mediation

If you are involved in a disagreement or dispute, you can seek help from the University's Mediation Service. This service is impartial, non-judgemental, and confidential. Requests for mediation support should in the first instance be made either to the Mediation Service Manager, or the Students' Union Advice and Community Manager.

Advice for students with disabilities, long-term illness, and specific learning difficulties

If you have a disability and/or specific learning difficulty (such as dyslexia), we strongly advise you to speak to the Disability Service team, your Personal Tutor or Director of Studies as soon as possible and preferably before your programme begins. Referral to the Disability Service will enable us to assess your needs and make arrangements to support you.

Any personal information you give when disclosing your disability will be treated in confidence and made available *only* to relevant members of staff and only *with your permission*. If you don't disclose your disability it may be difficult for the University to provide suitable support to help you during your studies. Disclosure will not disadvantage you in any way.

The Disability Service provides advice, guidance, information and support for a range of needs including:

- Autism Spectrum Disorders/Asperger's Syndrome
- dyslexia and other specific learning difficulties
- mental health
- mobility impairments
- sensory impairments
- health conditions such as epilepsy, HIV, diabetes or chronic fatigue.

A screening process is available if you think you may have a specific learning difficulty/dyslexia.

Disability Advisers are also responsible for making applications for alternative arrangements for exams and assessments. Therefore, if you think that, because of a disability, you need alternative

exam arrangements (such as extra time or the use of a computer) please discuss this with a Disability Adviser without delay.

> **Further information**
>
> www.bath.ac.uk/groups/disability-service

Pregnancy and Maternity

The University is committed to being as flexible as possible in supporting students who become pregnant, decide to terminate a pregnancy or have a very young child. You are not under any obligation to inform the University of these circumstances, but doing so will enable us to put in place arrangements that will assist you in undertaking your programme of study.

You can seek advice, guidance and support via your Director of Studies, Personal Tutor and the University's Student Services.

> **Further information**
>
> www.bath.ac.uk/guides/getting-advice-if-you-are-pregnant-while-studying-or-have-a-young-child

Care Leavers and Estranged Students

The University is committed to supporting students from a wide range of backgrounds and circumstances including those who are care leavers, from a Foyer or are estranged from their family. We are aware of the challenges students may face when starting university and we want you to get the best out of your programme and university experience. We are able to offer you advice and guidance about settling in, academic studies, funding, accommodation, wellbeing and careers. The service we provide is confidential and entirely optional in relation to the level of support you feel that you may need.

> **Further information**
>
> www.bath.ac.uk/guides/financial-support-if-you-are-leaving-care
> www.bath.ac.uk/students/finance/funding-advice/additional-financial-responsibilities

Careers Service

The University Careers Service can support you through the career planning process, whatever your career aspirations. In addition to providing support with developing your employability, and guidance on how to make informed career decisions, Careers Advisers will provide help with writing your CV, practising aptitude tests, and improving your interview skills. Being in regular contact with several hundred major employers, the Careers Service is also a fantastic source for graduate job vacancies for Bath students, as well as the organiser of several major careers fairs each year.

> **Further information**
>
> The **Careers Service** is open throughout the year, including the vacations.
> Check the web site for opening times: www.bath.ac.uk/students/careers/
> The web site includes the *Myfuture* vacancies portal

Contact careers@bath.ac.uk or 01225 386009 or follow the Careers Service on Twitter @CareersatBath or Facebook (search for BathUniCareers).

Assessment

Feedback to Students on Assessment

During your programme, you will receive feedback on assessed work. Feedback on assessments may take different forms, depending on your subject and the type of assessment. You will be informed of the timing and nature of the feedback you will receive on each assessment, including whether the piece of work itself will be returned to you. For formal written examinations, students may receive general feedback to the group rather than individual feedback. You can discuss feedback you receive on assessments alongside your performance and progress in your studies at meetings with your Personal Tutor.

Department of Computer Science Feedback Policy
<u>Introduction</u>

This document should be read in conjunction with the leaflet from the LTEO entitled **"Feedback: are you getting yours?"**

All types of feedback are designed to help you with your learning, whether it is help as you are exploring new topics or feedback on how your learning is progressing. There are three types of feedback that each unit will normally provide you with. These are:

- Feedback during the unit
- Feedback after you have submitted an assignment
- Feedback after you have taken an examination

<u>Feedback during the unit</u>

Feedback that you receive whilst you are studying a unit is designed to help you with your learning. There are many forms in which this feedback can take place. Each unit will adopt a different method for giving you this type of feedback. This is because each unit is different and will need to ensure that the feedback you receive is linked to the learning activities that you have undertaken. For example, the way you receive feedback in a practical unit such as programming will be different to that which you receive in one that is theoretical such as discrete mathematics for computation. In addition to formal timetabled lectures, your lecturer will be available for you to discuss and receive feedback on your progress. The way your lecturers will make themselves available to you will differ from person to person.

In general, your unit will direct you to undertake some work, the mark for which will not contribute to your overall grade. One example of such work is weekly lab exercises or work sheets. This work is designed to help you to learn and to feed back to you on your progress. You may receive a mark for the work you undertake, but it will not be used in calculating your overall grade for that unit.

Examples of the feedback that you will receive will normally include some/all of the following:

- Marked lab/work sheets returned with comments from your tutor
- In-lab/tutorial reviews of work/lab sheets that have been set
- Hands-on feedback during the support you receive in your laboratories and tutorials
- Verbal discussions with your tutor/lecturer clarifying any problems you have with your progress or the learning material
- Verbal discussions with your fellow students

<u>Feedback after an assessed coursework assignment</u>

Some of the units that you study will be assessed entirely through an examination, some entirely through coursework assignment(s) or some through a mixture of both. The reason for the variation is that each unit needs to assess different types of knowledge and skills. Some of these are more suited to an examination whilst others are more appropriately assessed by an assignment. In the context of feedback to you for any assignments that you submit a unit will normally adopt some /all of the following:-

- Each assignment specification will contain details of assessment grade criteria which makes it clear what it is that the assignment is asking you to do and how the mark for the assignment is to be determined.

- You will receive feedback within 15 working days of the submission deadline for an assignment (as long as you have submitted the work by the deadline).

- The feedback will consist of a mark plus comments. These could be written on the script that you submit or communicated to you via Moodle.

- Where a unit requires you to submit more than one assignment, wherever possible we will endeavour to give you feedback on the first before you are asked to attempt the second.

<u>Feedback after examinations</u>

Examinations normally take place at the end of a semester. They are designed to measure how much you have learnt in the units that you have been studying. You will receive feedback on each unit for which you have taken an examination. This feedback will normally be given to you within 20 working days of the end of the relevant examination period. The feedback will normally comprise of some/all of the following:

- Your percentage mark

- Generic feedback consisting of a summary of the areas in which the students as a whole have done well and those areas where collectively students are perceived to be in need of further learning. This feedback will normally be communicated via Moodle or a specially arranged feedback session

- Marked examination scripts for year 1 students will normally be made available.

- Any student wanting further feedback on their exams can rework their paper and ask their lecturer for feedback

- Support for exam preparation including the use of past papers being made available to students and used for revision/exam preparation

- Individual support and feedback offered to students who have failed a unit and/or must undertake supplementary assessment

<u>Feedback on your final year project</u>

During your final year you will undertake a significant piece of assessed work referred to as the Final Year Project. It spans both semesters and is an excellent opportunity for you to research into a topic of your choosing. At the start of the year you will be allocated a project supervisor. The role of the supervisor is to provide you with help, guidance and feedback as you work on your project. You are encouraged to meet regularly with your project supervisor throughout the year. These meetings provide you with the opportunity to both ask for and receive feedback on your progress. The onus

is on you to manage your supervisory meetings and get the most out of them. Some typical examples of feedback that students request are:

- Feedback on draft sections/chapters
- Feedback on the appropriateness of references used
- Feedback on proposed technical solutions to a problem
- Feedback on the developing/developed implementation
- Feedback on areas to undertake new/further reading

Additionally, to help you manage your project and bring it to a successful conclusion you will be required to submit work at regular intervals throughout the year. You will receive feedback on the work you submit from your supervisor. This will either be face-to-face or, more typically, via Moodle. You should use this feedback to gauge how well your project is progressing. You are encouraged to discuss this feedback with your supervisor at your regular supervisory meetings. You can find out more on the Final Year Project and how it is assessed via Moodle.

Feedback from you to us

There are several mechanisms available for you to feed back to the Department any concerns that you have regarding your studies. These are:-

- Staff Student Liaison Committee (SSLC). This is the formal committee through which the delivery of your course and its units are discussed with representatives elected by students from the student body. Your student representatives on this committee should ask you for your views on the course, represent these views at the committee and feed back to you on any action taken by the Department in response to the issues that you raised.

- Student Evaluation Questionnaires. At the end of the unit we will ask you for your views on how it has gone. A summary of the evaluations and the Department's response is presented to the SSLC.

- Verbal feedback to staff (academic staff, administrative staff, tutors, unit leaders, personal tutors, year tutors, Director of Studies and Director of Teaching).

Academic Integrity: Training and Test

As a student registered on a University of Bath award, you are required to undertake the academic integrity training and pass the associated test.

The academic integrity training aims to provide all students with a basic knowledge and understanding of good academic practice. This includes an understanding of plagiarism and other assessment offences, and skills necessary to reference your work appropriately.

The training and test are accessed from Moodle by clicking on the link entitled **'Academic Integrity Initiative'**: http://moodle.bath.ac.uk

If you have any access problems, then please contact Sue Paddock in the first instance.

When you have completed the training tutorial and are confident that you have understood it, you should undertake the test.

To pass the test you will need to achieve a mark of 85%. You can take the test as many times as necessary until you pass.

If you do not pass the test, you will need to re-visit the training and/or look at the other guidance available to you (see: www.bath.ac.uk/asc/study-skills/academic-integrity.html) or as required by your Director of Studies, and then take the test again.

You will not be able to progress beyond the next progression point in your studies, irrespective of your programme marks, until you pass this test. Ultimately this means that, if you have not passed the test, you will not be able to receive your award. Your Director of Studies will be able to confirm when the next progression point occurs for your stage of your programme.

Further information

Academic integrity: www.bath.ac.uk/asc/study-skills/academic-integrity.html
Regulation 3.7: www.bath.ac.uk/regulations/Regulation3.pdf

Plagiarism detection and personal data

When you hand in a piece of assessed coursework, you will be expected to make a declaration that the work is your own and, where you have re-used your own work and/or used other sources of information, that you have referenced the material appropriately.

The University uses the Plagiarism Detection Service, Turnitin. This service checks electronic, text-based submissions against a large database of material from other sources and, for each submission, produces an 'originality report'. It makes no judgement on the intention behind the inclusion of unoriginal work; it simply highlights its presence and links to the original source.

The service complies with European Data Protection legislation. When you registered with the University, you gave it permission to process your personal data for a variety of legitimate purposes. This includes allowing the University to disclose such data to third parties for purposes relating to your studies. The University, at its sole discretion, may submit the work of any student to the Plagiarism Detection Service (in accordance with Regulation 15.3e – see below) and may make, or authorise third parties to make, copies of any such work for the purposes of:

i) assessment of the work
ii) comparison with databases of earlier work or previously available works to confirm the work is original
iii) addition to databases of works used to ensure that future works submitted at this institution and others do not contain content from the work submitted.

The University will not make any more copies of your work than are necessary, and will only retain these for so long as remains necessary, for these purposes.

Please note that, if at any time the University submits any of your work to the Plagiarism Detection Service, the service will be provided with, and will retain, certain personal data relating to you – for example, your name, email address, programme details and the work submitted. Such data may be

transferred by the Plagiarism Detection Service to countries worldwide (some of which may not be governed by EU data legislation) in order for the work to be checked and an originality report generated in accordance with the proper workings of the Plagiarism Detection Service. Personal data is retained indefinitely by the Plagiarism Detection Service upon submission of work. You may ask for your personal data to be removed by contacting the University's Data Protection Officer.

Further information

The University's procedures on Examination and Assessment Offences (QA53) are described at: www.bath.ac.uk/quality/documents/QA53.pdf
Regulation 15, Assessment of undergraduate and taught postgraduate programmes: www.bath.ac.uk/regulations/Regulation15.pdf
University's Data Protection Officer: 4 West 3.5 dataprotection-queries@lists.bath.ac.uk.

Academic Integrity: Referencing and Plagiarism

Plagiarism is the use of any published or unpublished work without proper acknowledgement in your references. Plagiarism occurs when a student 'borrows' or copies information, data, or results from an unacknowledged source, without quotation marks or any indication that the presenter is not the original author or researcher.

Another form of plagiarism (and hence cheating) is auto-plagiarism or self-plagiarism. This occurs when a student submits work (whether a whole piece or part of a piece) without acknowledging that they have used this material for a previous assessment.

If you use someone else's work – say, by summarising it or quoting from it – you must reference the original author. This applies to all types of material: not only text, but also diagrams, maps, tables, charts, and so on. Be sure to use quotation marks when quoting from any source (whether original or secondary). Fully reference not only quotations, but also paraphrases and summaries. Such references should then be included in a bibliography or reference list at the end of the piece of work. Note that the need for referencing also applies to web-based material; appropriate references according to the type of work or image should always be given.

There are several acceptable methods of referencing material. Examples include the Harvard system and the Numeric system. **Ask your Director of Studies or Personal Tutor for further information and advice on the referencing system used on your programme.**

Guidance on referencing and plagiarism is available through skills training run by the University and the Students' Union, as well as online resources. Referencing guides are also available in print in the Library, and your Subject Librarian will be able to help with any questions.

Further information

For further information on all our skills and development opportunities see: http://go.bath.ac.uk/skills
Academic integrity: www.bath.ac.uk/asc/study-skills/academic-integrity.html
Library resources: www.bath.ac.uk/library/infoskills/referencing-plagiarism
Students' Union Skills Training: thesubath.com/skills-training

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Academic Integrity: Penalties

Any student who is found to have used unfair means in an examination or assessment procedure will be penalised. 'Unfair means' here include:

- cheating - for example, unauthorised use of notes or course material in an examination
- fabrication - for example, reporting on experiments that were never performed
- falsification - for example, misrepresentation of the results of experimentation
- plagiarism, including self-plagiarism (see above)
- unfair collaboration or collusion - representation of work produced in collaboration with another person or persons as the work of a single candidate.

The University's Quality Assurance Code of Practice, QA53 Examination and Assessment Offences, sets out the consequences of committing an offence and the penalties that might be applied.

Penalties for unfair practice will be determined by the Department or by the Faculty/School Board of Studies in line with the procedures set out in QA53. They may include failure of the assessment unit or part of a degree, with no provision for reassessment or retrieval of that failure. Proven cases of plagiarism or cheating can also lead to an Inquiry Hearing or disciplinary proceedings. Claims of inadvertence or ignorance will not be accepted as a basis for mitigation of a penalty.

If you are accused of an offence, the Students' Union's welfare services are available to support you.

> *Further information*
>
> Examination and assessment offences: www.bath.ac.uk/quality/documents/QA53.pdf
> Student's Union advice and support: thesubath.com/support

Word Counts

Written coursework tasks will normally have a word range or limit. This is in order to give an indication of the depth and detail of work required, and to ensure that students' submitted work is comparable. You will be required to declare the word count for your work when submitting it for assessment.

If you do not observe the given word range or limit for the coursework task, for example if you exceed the word limit, then a penalty will be applied. The penalty that would apply should be stated in writing when the assignment task is distributed. You should take note of what is included when calculating the total word count (e.g. whether or not contents pages, appendices, footnotes, bibliographies and other elements that are not part of the main text are included).

You should check with your Director of Studies if you have questions about word counts and penalties.

Late Submission of Coursework

You will be expected to hand in all assessed coursework and dissertations/projects by a specified date and time. This is to ensure fairness to all students who are submitting work.

If there are valid circumstances preventing you from meeting a deadline, your Director of Studies may grant you an extension to the specified submission date. Forms to request an extension are available from your Department. You will need to provide a description of the circumstances which

you feel support your request. Your Director of Studies may ask you to produce supporting evidence.

Please note that:

- if you submit a piece of work after the submission date, and no extension has been granted, the maximum mark possible will be the pass mark
- if you submit work more than five working days after the submission date, you will normally receive a mark of 0 (zero), unless you have been granted an extension.

It is not usually possible to mark coursework anonymously if it is submitted after the deadline.

It is important that you speak to your Director of Studies as soon as possible if you become concerned about your submission deadlines.

See also the section in this Handbook on **Submission deadlines**.

Individual Mitigating Circumstances

Individual Mitigating Circumstances (IMCs) are the conditions which temporarily prevent you from undertaking assessment or significantly impair your performance in assessment. As such, the measure of their severity is not about impact on you, but the impact on your affected assessment.

Full information and guidance on Individual Mitigating Circumstances and Assessment (including definitions of IMCs, in the document "What are Individual Mitigating Circumstances?") is available at: www.bath.ac.uk/registry/imc/imc-students.html

It is strongly advised that you become familiar with the available guidance so that you understand the process and timescales should such circumstances arise.

You should make yourself familiar with these definitions, in addition to any IMC guidance offered by your Department, and support and guidance offered through the Disability Service (www.bath.ac.uk/groups/disability-service) or the Students' Union Advice and Support Service (thesubath.com/support).

Your Department/School will be able to advise you on how to submit an IMC claim, and your Director of Studies can help you to understand the potential implications of your IMC claim on your overall progress and/or award, in light of your academic achievement to date and the assessment regulations for your programme.

Should you wish any IMCs to be taken into account by the Board of Examiners for Programmes when considering your progression or award classification, notify your Director of Studies no more than three days after the affected assessment by completing the IMC report form available at: www.bath.ac.uk/registry/imc/imc-students.html

You will also need to submit evidence of how your circumstances affected the relevant assessment(s), for example, a medical certificate in the case of illness or injury.

If you know of a potential IMC that may affect your assessment before you begin an assessment period, it is important that you notify your Director of Studies in advance. After speaking to your Director of Studies, if you do intend to submit a formal IMC claim for the affected assessment(s), you will still need to complete the form and follow procedures.

Assessment processes

Assessment and marking processes at the University are designed to ensure that assessment of your work is fair and consistent, and that academic standards are appropriate and comparable between the University and other higher education institutions. This is achieved in a number of ways.

Marking: Assessments you will complete during your programme are marked according to:

- *marking criteria (or assessment criteria)* - these are the knowledge, understanding and skills which it has been identified that students should demonstrate in the assessment and which are taken into account during marking. They are based on the learning outcomes being assessed
- *marking schemes* - these are detailed descriptions of how specific numbers of marks should be assigned against individual components of an answer within the assessment task
- *grade descriptors* - these are descriptions of the levels of achievement required in order to get a result within a given band of marks (e.g. 70% or more).

Anonymous marking: The University has adopted a principle of anonymous marking in order to protect students and staff from bias, and the perception of bias, in the marking process. It applies to all examinations and, where practical, other assessment. It is not possible to mark all coursework anonymously as in some types of assessment the student can be easily identified by the marker (e.g. presentations, group work, laboratory work) or it might not be practical, or in the student interest, to do so. You will be informed when your coursework is to be marked anonymously.

Moderation: Both the setting and the marking of assessments are independently checked through a process known as moderation to ensure that questions test the learning outcomes and are set at the right standard, and that marking is consistent and fair. Moderation is conducted by internal examiners and also by your External Examiner (see below).

Boards of Examiners:

Assessment decision-making at the University is the responsibility of Boards of Examiners established at three levels: assessment outcomes go first to *Boards of Examiners for Units*, then *Boards of Examiners for Programmes*, then finally to *Boards of Studies*. Boards of Studies confirm decisions relating to student progression from one stage of the programme to the next and the final award. The assessment marks you are given initially by markers are therefore provisional up until the point when they have been confirmed by the Board of Studies for your programme. An official release date is set when your confirmed results will be made available to you via SAMIS (the University's student records system). An appeal can only be made in relation to a confirmed mark (see the section in this Handbook on **Procedures for Academic Appeals**).

All marks for a unit are reviewed at a meeting of a Board of Examiners for Units which will verify that the assessment process has been conducted appropriately and that the marks are an accurate reflection of the standards achieved. On rare occasions a Board of Examiners may decide to

recommend a change to the marks assigned initially, based on evidence that there was a problem with the assessment (for instance, disruption during an examination, or an exam paper that was too easy or difficult) which means that the marks assigned initially do not accurately reflect the standards achieved by the candidates. This adjustment is known as scaling and under these circumstances the marks of all affected students will be changed.

External examiners

An External Examiner is someone from another University or a professional organisation who is suitably qualified and experienced in the relevant field of study. At least one External Examiner is appointed for each taught programme or group of programmes. The role of External Examiner is an important one in assuring that assessment processes are fair and academic standards are appropriate, and supporting the development of your programme. External Examiners look at draft examination papers and samples of assessed work, and attend Boards of Examiners.

Once a year, External Examiners provide a written report on each taught programme. University staff will look at these reports and a response will be made to the External Examiner's comments. Staff/Student Liaison Committees (SSLCs) also discuss External Examiner reports as part of annual monitoring activity. You can read the latest External Examiner report for your programme, and the University's response to it, at:
www.bath.ac.uk/quality/externalinput/external-examiners-reports.bho

The External Examiners for your programme are:
Prof T Crick, Lecturer, University of Cardiff
Dr Monika Seisenburger, Swansea University

It is not appropriate for students to make direct contact with External Examiners. If you are dissatisfied with the process or outcome of an assessment, and are considering whether to raise this either informally or formally, the sections of this Handbook on **Procedures for Academic Appeals** and **Dealing with a problem involving the University: Complaints** give some more information about the University's procedures for student complaints and academic appeals. The section on **Student representation** sets out how students can engage with the quality management process through which the University considers and responds to External Examiners' comments and suggestions.

Assessment Regulations

The University's **New Framework for Assessment: Assessment Regulations: Phase 1 for first-degree programmes ('NFAAR-UG')** specifies the rules governing students' progression from one stage of their programme to the next as well as for the award of degrees. The rules cover all areas of assessment, including supplementary assessment and the extent to which failure may be condoned. If you began the first stage of your programme in or after the 2008/09 academic year, NFAAR-UG applies to you. (If you began before then, please ask your Director of Studies for guidance on assessment).

Your programme is covered by the NFAAR-UG, so your work will be assessed according to its rules.

If at any time you are in doubt about how NFAAR-UG provisions apply to your work, please consult your Director of Studies.

This section highlights areas of the University's assessment framework for the type of programme you are undertaking. It explains the regulations that govern your assessment and outlines how the University makes decisions concerning your progression through your programme and award. Complete information is available in the NFAAR-UG document.

Important information

This section may contain terms unfamiliar to you. In addition to the explanations we give below you can find full definitions at:
www.bath.ac.uk/registry/nfa/nfaar-ug-appendix-02.pdf
For full details of the NFAAR-UG, visit: www.bath.ac.uk/registry/nfa
You can find a student introduction to the NFAAR-UG at: www.bath.ac.uk/registry/nfa/nfaar-ug-intro-faq.pdf
For information relating to your programme in the current academic year, visit:
www.bath.ac.uk/catalogues/

Your programme and how you are assessed

Within your programme of study, there are *compulsory units*, (i.e. those units in a programme which must be taken by every student registered on the programme), and *optional units* (i.e. those units you may choose from a range of options).

The **Programme Description: Structure of the programme** section in this Handbook shows the structure of your programme. In the table, compulsory and optional units are labelled 'C' and 'O' respectively.

Please note that you can also access this information via links in your programme's description in the Programme and Unit Catalogues available at: www.bath.ac.uk/catalogues

At the end of the table, there are links to the relevant appendices of the NFAAR-UG which state exactly how the assessment rules operate for each stage of your programme.

There are some units that you must pass in order to progress to the next stage of your programme and to achieve the normal award for the programme at the end. Such units are called *Designated Essential Units* (*DEU*s). Failure in a DEU – even marginal failure – will prevent you from progressing (or completing) your programme.

Programmes are divided into a number of *parts* and *stages*. For full-time students, stages usually correspond to the year of study (so, for example, most first-year students will be in Stage 1 of their programmes).

Within each stage of a programme, the contribution of each unit's assessment to the calculation of the *Overall Stage Average* (*OSA*) is normally directly proportional to the credit-values of the unit concerned. Placement units form part of a stage and have a credit weighting. Some placement

units carry marks and some are just pass/fail. Only enhanced placement units contribute to the *Overall Programme Average (OPA)* however.

The normal pass mark for a unit is 40%. In some units, you might need to achieve a threshold mark in one or more component assessments in order to pass the unit overall.

The rules differ slightly between 'Coexistent Master Programmes' (which lead to a Master's degree but have an associated programme leading to a Bachelor's degree) and other programmes.

If you fail a stage, you will be required either to repeat the entire stage or to transfer to a *Designated Alternative Programme (DAP)*, if one exists, or if you fail very badly, to withdraw from the University. Where stage repeats are possible within the set limits, the repeating of any stage will be permitted once only.

At the end of each stage a Board of Examiners will decide whether you have passed the stage. The outcome will depend on both (1) your average mark in the stage and (2) the marks you obtain for each unit. Generally, if you pass each of your units (and, in a Coexistent Master programme, reach any OSA requirement set in addition), you will progress (or, after the final stage, be recommended for an award).

If you fail a large number of units (or, in a Coexistent Master programme do not reach any OSA requirement set in addition), you might fail the stage outright without any opportunity for supplementary assessment. (Further information on supplementary assessment is provided below.)

Particular rules apply to failure of units. They are as follows:

- if you fail any DEUs, you will have to undertake supplementary assessment – unless you have failed so many DEUs that you fail the stage outright
- if you fail any non-DEUs badly (i.e. achieve less than 35%), you will have to undertake supplementary assessment – unless you have failed so many units that you fail the stage outright
- if you fail only non-DEUs marginally (i.e. achieve 35%-39%), you might be able to progress without supplementary assessment. Whether you do progress will depend on the total credit value of the failed units and also on your OSA.

Your degree result is based on the calculation of your *Overall Programme Average (OPA)* based on the stages in Parts 2 and 3 of your programme. The contribution of each stage of the programme is set out in the table of assessment weightings and decision references in the **Programme Description: Structure of the programme** section in this Handbook. Follow the links provided in the table to see a clear description of the assessment rules for each stage of your programme. Stages in Part 1 are not included in the OPA calculation.

Supplementary assessment

'Supplementary assessment' is the term normally used for an opportunity given to a student to retrieve failure before starting the next stage of a programme. It generally involves re-doing

coursework or re-sitting an examination. Students undertaking supplementary assessments are likely to have to return to the University in the summer to re-sit examinations.

For the 2017–18 academic year, this period will be 15 August to 24 August 2018.

Each unit's method of supplementary assessment is shown in the online Unit Catalogue.

In units where the original assessment is a written examination, supplementary assessment may sometimes take the form of reworking an examination paper, known as 'mandatory extra work', rather than re-sitting the examination. In such cases the pass mark is 70% and a mark below 60% is considered a bad fail.

If you pass all your supplementary assessments, you will be able to progress onto the next stage of your programme.

The outcomes of failing a supplementary assessment are as follows:

1) if you fail supplementary assessment in a DEU, you will fail the stage
2) if you fail supplementary assessment in a non-DEU badly, you will fail the stage
3) if you fail supplementary assessment in a non-DEU marginally, you might be able to progress; whether you may do so will depend on how many units you have failed (and in some cases also on your Overall Stage Average).

Exit awards – CertHE and DiplHE

If you leave your programme early you may be eligible for a generic exit award, either a Certificate of Higher Education (CertHE) or a Diploma of Higher Education (DiplHE).
Further information on these awards can be found at:
www.bath.ac.uk/quality/documents/QA3-certhe.pdf (for the CertHE)
www.bath.ac.uk/quality/documents/QA3-diplhe.pdf (for the DiplHE).

Procedures for Academic Appeals

Students wishing to submit a request for an academic appeal should refer to Regulation 17 (Conduct of Student Academic Appeals and Reviews):
www.bath.ac.uk/regulations /Regulation17.pdf

You are also strongly advised to read the online guidance provided by the Academic Registry:
www.bath.ac.uk/registry/appeals

Independent advice about academic appeals is offered by the Students' Union Advice and Support Service: thesubath.com/support

Regulation 17.16 outlines how students may appeal against formal Board of Studies decisions in respect of one or more of the following:

i) the student's suitability to progress from one stage of the programme of study to the next

ii) the student's suitability to remain on the programme of study

iii) the marks/grades, degrees, certificates or diplomas, and the classifications/grades awarded to the student.

The regulation also sets out the grounds on which an appeal can be based. Please note that:

- dissatisfaction with a mark or set of marks, or any other aspect of the properly exercised academic judgement of the examiners, will not of itself be acceptable as a valid ground for an academic appeal (Regulation 17.1)
- students who have concerns about assessment outcomes that have not yet been approved by a Board of Studies should seek advice in the first instance from their Director of Studies. This may include matters such as suspecting errors in the totalling or transcription of marks/grades, or wishing to seek clarification about the marking process (Regulation 17.2).

All academic appeals must be submitted within the timescales set out in Regulation 17. Students must provide the required information and evidence, including a completed AA1 form. The form and further academic appeals guidance are available at: www.bath.ac.uk/registry/appeals

Student Complaints are dealt with under separate procedures: www.bath.ac.uk/regulations/Appendix1.pdf

If you are uncertain as to whether your concerns are a potential academic appeal or a student complaint, please refer to the guidance at: www.bath.ac.uk/students/support/complaints

General Information

University Regulations for Students

All registered students of the University are subject to the University's Regulations for Students. The Regulations contain rules and other important information about being a student at the University of Bath, including regulations governing the payment of fees due to the University, student discipline, fitness to study and those governing attendance, conduct and progress in studies. They also form part of the formal contract between you and the University. You will find references to the requirements of the Regulations for Students throughout this Handbook. You are advised to download a copy of the Regulations and read them carefully as they contain a lot of important information.

> *Further information*
>
> The full Regulations for Students can be found at: www.bath.ac.uk/regulations

Registration Status

Note that only registered students may use the University's facilities, such as email, Moodle and the Library. You will be asked to register online at the start of your programme of study and then to re-register at the start of every academic year thereafter until you have completed your programme. It is a requirement that you register when asked to do so. Tuition fees for each academic year are payable at registration in full or in instalments.

Regulation 1.1 explains the requirement to register:
www.bath.ac.uk/regulations/Regulation1.pdf

Regulations 2.4 and 2.10 explain the consequences of non-payment of tuition fees:
www.bath.ac.uk/regulations/Regulation2.pdf

Attendance Monitoring

Guidance and requirements on attendance, including the University's Attendance Monitoring and Engagement Policy, are available at:
www.bath.ac.uk/students/visa-advice/attendance-monitoring

This page also sets out information on when and how to request an authorised absence.

Change In Your Circumstances

You must ensure that the University holds your correct, up-to-date, personal and academic details within SAMIS. If you change your address – either your semester-time or home address – please ensure that you update your details online at: www.bath.ac.uk/samis

If you change your name, you will need to provide valid proof of the change. Please speak to your Department or Faculty/School administration, or Student Services in the Roper Centre, for advice on how to do this.

If you are considering suspending your studies, transferring from one programme to another, or withdrawing from your programme, please discuss your situation with your Director of Studies. They will be able to advise you on an appropriate course of action.

It is a University Regulation (3.1) that you attend regularly; if circumstances are such that you are not able to do so, then please contact your Director of Studies to discuss your situation and agree an appropriate course of action.

Your Personal Tutor will also be able to provide support and guidance on matters relating to your programme.

The financial implications of withdrawing from the University or suspending your studies can be significant. You will find general information at: www.bath.ac.uk/students/finance/funding-advice/changes-to-your-study

The Student Money Advice Team in Student Services and the Student Finance Office will be able to advise you on the implications for fees in your situation and on how to suspend any student funding you are receiving.

If you are an international student holding a Tier 4 visa, you should consult the advisers in the Student Immigration Service about the implications of suspending or withdrawing from your programme: www.bath.ac.uk/visa

You will need to register any change of academic circumstance, including a change of optional units, with the University. Please speak to your Department or Faculty/School administration who will advise you on how to do this.

Health and safety

The University's Health and Safety Policy Statement and policies, standards, and guidance on specific topics are available at: www.bath.ac.uk/hr/stayingsafewell/hs-policy

The Policy Statement is also displayed throughout the campus. Staff within the University Health, Safety and Environment Service (Wessex House 3.12) provide professional advice on health and safety matters and monitor the health and safety performance of the University.

Further information

www.bath.ac.uk/hr/stayingsafewell or email: uhse@lists.bath.ac.uk

Current University guidance on fieldwork and on work placements:
www.bath.ac.uk/hr/stayingsafewell/working-off-site

Data Protection

The University's Data Protection Policy and Guidelines on Data Protection may be accessed via the data protection website: www.bath.ac.uk/data-protection

Guidance notes for students and academics undertaking research www.bath.ac.uk/data-protection/guidance/academic-research.

Equality and Diversity

Everyone at the University of Bath has a responsibility for promoting equality and fostering good relations between all members of the community, students and staff, and also for eliminating unlawful discrimination, harassment and victimisation against anyone for reasons of age, disability, gender, pregnancy and maternity, race (this means colour, nationality including citizenship, ethnic or national origins), religion or belief, sexual orientation, or transgender status. The new equality duty also covers marriage and civil partnership with regards to eliminating discrimination in employment.

Further information

There is a range of information and resources available at www.bath.ac.uk/equalities or email: equalsdiv@bath.ac.uk

Accessibility
An access guide is available which outlines the disabled access features and route plans at the University of Bath:
www.disabledgo.com/organisations/university-of-bath/main-2

Appendix A – Structure of Programmes

The Department of Computer Science offers the following undergraduate programmes:

Please note that the content of the programme description below is correct at the time of production of this Handbook and that programmes and units may be subject to reasonable change (see **Unit and Programme Changes** below).

Current versions of unit and programme descriptions are available via the online Unit and Programme Catalogues: www.bath.ac.uk/catalogues

MComp (Hons) Computer Science	For students who demonstrated continued high ability who want to undertake further study primarily in aspects of Computer Science just emerging from current research.
MComp (Hons) Computer Science and Maths	For students who demonstrated continued high ability who want to undertake further study primarily in aspects of Computer Science and Maths just emerging from current research.
BSc (Hons) Computer Science	For students wishing to study a broad-based course that provides a strong theoretical foundation.
BSc (Hons) Computer Science with Business	For students wishing to combine the main topics of Computer Science with an introduction to a broad range of business topics taught by the School of Management.
BSc (Hons) Computer Science and Mathematics	For students wishing to study in depth in both Computer Science and relevant areas from pure Mathematics.

These degree programmes are available in the following formats:

- **Full-time**: All three years (four years for MComp) are spent in full-time study at the University.
- **Full-time with overseas Study**: The third year of the programme is spent in full-time study at an approved University, or similar Institute of Higher Education, outside the UK but usually within Europe.
- **Sandwich**: Students spend their third year or fourth year, if an MComp student, in industry including research establishments, the civil service and so on. Although most students spend this year in the UK each year a small number go abroad for their industrial training. The placement year normally comprises one twelve-month period of training in a single establishment.

Programme Specifications

Each of the Programmes mentioned in the preceding section is more fully described within the Programme Specifications. Programme Specifications are intended to provide a quick-reference guide to each Programme, providing sufficient information for an applicant to decide which

Programme is applicable to them. The Programme Specifications of all Programmes provided by the department are available in the Programme and Unit Catalogue, which can be found at:

http://www.bath.ac.uk/catalogues/2017-2018/cm/cm-proglist-ug.html

Programmes in Computer Science (BSc)

Programme code	USCM-AFB06
Programme title:	BSc (hons) Computer Science
Award type:	Bachelor of Science with Honours
Award title:	
Mode of Attendance:	Full time
Length:	3 Years
State if coexistent M-level programme:	
State any designated alt prog(s):	None
Approving body and date of approval:	Faculty of Science T & Q Committee (15/06/05)

Programme code:	USCM-AKB07
Programme title:	BSc (hons) Computer Science (with Placement)
Award type:	Bachelor of Science with Honours
Award title:	
Mode of Attendance:	Thick sandwich
Length:	4 Years
State if coexistent M-level programme:	
State any designated alt prog(s):	None
Approving body and date of approval:	Faculty of Science T & Q Committee (15/06/05)

Programme code:	USCM-AAB07
Programme title:	BSc (hons) Computer Science with Study Year Abroad
Award type:	Bachelor of Science with Honours
Award title:	
Mode of Attendance:	Full time
Length:	4 Years
State if coexistent M-level programme:	
State any designated alt prog(s):	None
Approving body and date of approval:	Faculty of Science T & Q Committee (15/06/05)

Part	Stage	Year	Period of Study	Unit Code	Unit Title	Status	Credits	DEU Status
1	1	1	AY	CM10251	Computing as a Science and Engineering Discipline	C	12	
			S1	CM10227	Principles of programming 1	C	12	DEU
				CM10194	Computer systems architecture 1	C	6	
				CM10196	Discrete mathematics for computation	C	6	
			S2	CM10228	Principles of programming 2	C	12	DEU
				CM10195	Computer systems architecture 2	C	6	
				CM10197	Analytical mathematics for applications	C	6	

Part	Stage	Year	Period of Study	Unit Code	Unit Title	Status	Credits	DEU Status
2	2	2	AY	CM20257	Integrated Group Based Project	C	6	
				CM20216	Designing Interactive Systems	C	12	
			S1	CM20217	Foundations of Computation 1	C	6	
				CM20219	Fundamentals of Visual Computing	C	6	
				CM20254	Datastructures and Algorithms	C	6	
				CM20255	Databases	C	3	
			S2	CM20220	Fundamentals of Pattern Analysis	C	6	
				CM20256	Functional Programming	C	6	
				CM20252	Artificial Intelligence	C	6	
				CM20253	Comparative Programming Languages	C	3	

For USCM-AAB07

Part	Stage	Normal period of study for this Mode		Unit code	Unit title	Unit status	Credits
2	3	Yr3	AY	CM20106	Study abroad	C	60

For USCM-AKB07

Part	Stage	Normal period of study for this Mode		Unit code	Unit title	Unit status	Credits
2	3	Yr3	AY	CM20105	Industrial placement	C	60

3	3	3/4	AY	CM30082	Individual Project	C	24	DEU
			S1		Students must take units totalling 30 credits in each semester. The year programme must include at least 4 units from the union of lists A1 and A2. Select between 2 and 3 Unit(s) from list A1:			
				CM30078	Networking	O	6	
				CM30070	Computer algebra	O	6	
				CM30072	Safety-critical computer systems	O	6	
				CM30171	Compilers	O	6	
				CM30174	Intelligent agents	O	6	
				CM30225	Parallel computing	O	6	
					Modern language units are only available to students who have studied the language within additional units in years 1 and 2 or with DoS-approval and must be studied at a level appropriate to prior language qualifications and skills. Select between 0 and 1 Unit(s) from the following list:			
				FL30277	Approved language option (Foreign Languages Centre)	O	6	
				MN20074	Business information systems	O	6	
				ZZ30001	Director of Studies approved unit	O	6	
			S2		Students must take units totalling 30 credits in each semester. The year programme must include at least 4 units from the union of lists A1 and A2. Select between 2 and 3 Unit(s) from the list A2:			
				CM30073	Advanced algorithms & complexity	O	6	
				CM30075	Advanced computer graphics	O	6	
				CM30080	Computer vision	O	6	
				CM30141	Advanced human computer interaction	O	6	
				CM30173	Cryptography	O	6	
				CM30226	Logic & semantics of programming languages	O	6	
				CM30229	Intelligent control and cognitive systems	O	6	
				CM40179	Entrepreneurship	O	6	
					Modern language units are only available to students who have studied the language within additional units in years 1 and 2 or with DoS-approval and must be studied at a level appropriate to prior language qualifications and skills. Select between 0 and 1 Unit(s) from the following list:			
				FL30278	Approved language option (Foreign Languages Centre)	O	6	
				MN30076	Business strategy	O	6	
				ZZ30004	Director of Studies approved unit	O	6	

Programmes in Computer Science with Business (BSc)

Programme code	USCM-AFB09
Programme title:	BSc(hons) Computer Science with Business
Award type:	Bachelor of Science with Honours
Mode of Attendance:	Full time
Length:	3 Years
State if coexistent M-level programme:	
State any designated alt prog(s):	None
Approving body and date of approval:	Faculty of Science T & Q Committee (15/06/05), September 2010

Programme code:	USCM-AKB10
Programme title:	BSc(hons) Computer Science with Business with Placement
Award type:	Bachelor of Science with Honours
Mode of Attendance:	Thick Sandwich
Length:	4 Years
State any designated alt prog(s):	None
Approving body and date of approval:	Faculty of Science T & Q Committee (15/06/05), Sept 2010

Programme code:	USCM-AAB10
Programme title:	BSc (hons) Computer Science with Business (with Study Year Abroad)
Award type:	Bachelor of Science with Honours
Mode of Attendance:	Full time
Length:	4 Years
State any designated alt prog(s):	None
Approving body and date of approval:	Faculty of Science T & Q Committee (15/06/05), September 2010

Part	Stage	Year	Period of Study	Unit Code	Unit Title	Status	Credits	DEU Status
1	1	1	AY	CM10251	Computing as a Science and Engineering discipline	C	12	
			S1	CM10227	Principles of Programming I	C	12	DEU
				CM10196	Discrete mathematics for computation	C	6	
				MN10545	Organisational Behaviour	C	6	
			S2	CM10228	Principles of Programming 2	C	12	DEU
				CM10197	Analytic mathematics for applications	C	6	
				MN10248	Introduction to accounting	C	6	

Part	Stage	Year	Period of Study	Unit Code	Unit Title	Status	Credits	DEU Status
2	2	2	AY	CM20216	Designing Interactive Systems	C	12	
				CM20257	Integrated Group Based Project	C	6	
			S1	CM10194	Computer Systems Architecture 1	C	6	
				CM20254	Datastructures and Algorithms	C	6	
				CM20255	Databases	C	3	
				MN20072	Managing Human Resources	C	6	
			S2	CM10195	Computer Systems Architectures 2	C	6	
				CM20252	Artificial Intelligence	C	6	
				CM20253	Comparative Programming Languages	C	3	
				MN20014	IT in its Business Context	C	6	

For USCM-AAB10

Part	Stage	Normal period of study for this Mode		Unit code	Unit title	Unit status	Credits
2	3	Yr3	AY	CM20106	Study abroad	C	60

For USCM-AKB10

Part	Stage	Normal period of study for this Mode		Unit code	Unit title	Unit status	Credits
2	3	Yr3	AY	CM20105	Industrial placement	C	60

3	4	4	AY	CM30082	Individual project	C	24	DEU
			S1	List A – Select 2 units. MN30281 appears in both option lists, students who want to take this option should only select it once, either from List A or from List B.				
				CM20217	Foundations of Computation	O	6	
				CM30078	Networking	O	6	
				CM30070	Computer Algebra	O	6	
				CM30171	Compilers	O	6	
				CM30174	Intelligent agents	O	6	
				CM30225	Parallel Computing	O	6	
				CM30072	Safety-critical Computer Systems	O	6	
				MN30281	Privacy, trust & security in information systems	O	6	
				ZZ30001	Director of Studies approved unit	O	6	
				List B – Select 1 Unit: MN30281 appears in both option lists, students who want to take this option should only select it once, either from List A or from List B				
				MN20032	e-Business	O	6	
				MN30281	Privacy, trust & security in information systems	O	6	
				ZZ30010	Director of Studies approved unit in the School of Management	O	6	
			S2	List A – Select 2 units: MN30270 appears in both option lists, students who want to take this option should only select it once, either from List A or from List B				
				CM30229	Intelligent control and cognitive systems	O	6	
				CM30226	Logic and Semantics of Programming Languages	O	6	
				CM30073	Advanced algorithms and complexity	O	6	
				CM30141	Advanced Human Computer interaction	O	6	
				MN30270	Virtual Organizing	O	6	
				CM40179	Entrepreneurship	O	6	
				ZZ30004	Director of Studies approved unit	O	6	
				List B – select 1 Unit: MN30270 appears in both option lists, students who want to take this option should only select it once, either from List A or from List B One may not choose the combination of CM20217 and MN20032.				
				ZZ30011	Director of Studies approved unit in the School of Management	O	6	
				MN30076	Business Strategy	O	6	
				MN30475	Sustainable operations management	O		
				MN30270	Virtual Organizing	O	6	

Programmes in Computer Science and Mathematics (BSc)

Programme code	USCM-AFB20
Programme title	BSc (Hons) Computer Science and Mathematics
Award type	Bachelor of Science with Honours
Mode of Attendance	Full time
Length	3 years
State if coexistent M-level programme	No
State any designated alternative programme(s)	None
Approving body and date of approval	Faculty of Science T & Q Committee (15/06/05) and 26.10.11

Programme code	USCM-AAB20
Programme title	BSc (Hons) Computer Science and Mathematics with Study Year Abroad
Award type	Bachelor of Science with Honours
Mode of Attendance	Full time with Study Year Abroad
Length	4 years
State if coexistent M-level programme	No
State any designated alternative programme(s)	USCM-AFB20 BSc (Hons) Computer Science and Mathematics
Approving body and date of approval	Faculty of Science T & Q Committee (15/06/05) and 26.10.11

Programme code	USCM-AKB20
Programme title	BSc (Hons) Computer Science and Mathematics with Year Long Placement
Award type	Bachelor of Science with Honours
Mode of Attendance	Full time with Thick Sandwich Placement
Length	4 years
State if coexistent M-level programme	No
State any designated alternative programme(s)	USCM-AFB20 BSc (Hons) Computer Science and Mathematics None
Approving body and date of approval	Faculty of Science T & Q Committee (15/06/05) and 26.10.11

Year 1								
Part	Stage	Normal period of study for this Mode		Unit code	Unit title	Unit status	Credits	DEU status
1	1	Yr1	AY	MA10207	Analysis 1	C	12	
				CM10251	Computing as a Science and Engineering discipline	C	12	
			S1	CM10227	Principles of programming 1	C	12	DEU
				MA10209	Algebra 1A	C	6	
			S2	CM10228	Principles of programming 2	C	12	DEU
				MA10210	Algebra 1B	C	6	

Year 2								
Part	**Stage**	**Normal period of study for this Mode**		**Unit code**	**Unit title**	**Unit status**	**Credits**	**DEU status**
2	2	Yr 2	AY	CM20257	Integrated Group Based Project	C	6	
			S1	Students have a choice in each semester, with Datastructures and Algorithms requisite for Artificial Intelligence, and with Fundamentals of Computer Graphics requisite for Fundamentals of Pattern Analysis.				
				CM20217	Foundations of Computation	C	6	
				CM20219	Fundamentals of Visual Computing	O	6	
				CM20254	Datastructures and Algorithms	O	6	
				CM20255	Databases	C	3	
				MA20216	Algebra 2A	C	6	
				MA20218	Analysis 2A	C	6	
			S2	CM20256	Functional Programming	C	6	
				CM20220	Fundamentals of Pattern Analysis	O	6	
				CM20252	Artificial Intelligence	O	6	
				CM20253	Comparative Programming Languages	C	3	
				MA20217	Algebra 2B	C	6	
				MA20219	Analysis 2B	C	6	

Year 3 for USCM-AAB20							
Part	**Stage**	**Normal period of study for this Mode**		**Unit code**	**Unit title**	**Unit status**	**Credits**
2	3	Yr3	AY	CM20106	Study abroad	C	60

Year 3 for USCM-AKB20							
Part	**Stage**	**Normal period of study for this Mode**		**Unit code**	**Unit title**	**Unit status**	**Credits**
2	3	Yr3	AY	CM20105	Industrial placement	C	60

Year 3 for USCM-AFB20 and Year 4 for USCM-AAB20 and USCM-AKB20								
Part	**Stage**	**Normal period of study for this Mode**		**Unit code**	**Unit title**	**Unit status**	**Credits**	**DEU status**
63	3	Yr3 /4	AY	CM30082	Individual project	C	24	DEU
			S1	**List A: Optional units:** Students must select options to include 3 CM units and 3 MA units across this year of the programme. Unit CM30070 from this list counts as either CM or MA. In Semester 1, select either two CM units and one MA unit OR one CM unit and two MA units. ZZ30016 counts as CM, and ZZ30015 counts as MA (no matter which department runs them)				
				CM30070	Computer algebra	O	6	
				CM30078	Networking	O	6	
				CM30174	Intelligent agents	O	6	
				CM30225	Parallel computing	O	6	
				ZZ30016	Director of Studies approved unit	O	6	
				List B: Optional units: • Student must check the Mathematical Sciences teaching timeslots when choosing units. To minimise clashes you should not choose more than one unit from each timeslot within the same semester.				
				ZZ30015	Director of Studies approved unit	O	6	
				MA30039	Differential geometry of curves & surfaces	O	6	
				MA30087	Optimisation methods of operation research	O	6	
				MA40238 MA40188	Number Theory (in even years) Algebraic Curves (in odd years)	O	6	

				MA40254	Differential and geometric analysis	O	6	
				MA30237	Group theory	O	6	
			S2	List A: Optional units: • Students must select 3 units from the union of List A and List B in Semester 2, which must consist of either 1 CM unit and 2 MA units OR 2 CM units and 1 MA unit • Units CM30073, CM30173 and CM30226 from these lists count as either CM or MA. ZZ30018 counts as CM, and ZZ30017 counts as MA (no matter which department runs them)				
				CM30073	Advanced algorithms & complexity	O	6	
				CM30075	Advanced Computer Graphics	O	6	
				CM30080	Computer vision	O	6	
				CM30173	Cryptography	O	6	
				CM30226	Logic and semantics of programming languages	O	6	
				CM30229	Intelligent control and cognitive systems	O	6	
				CM40179	Entrepreneurship	O	6	
				ZZ30018	Director of Studies approved unit	O	6	
				List B: Optional units: • Student must check the Mathematical Sciences teaching timeslots when choosing units. To minimise clashes you should not choose more than one unit from each timeslot within the same semester.				
				ZZ30017	Director of Studies approved unit	O	6	
				MA30055	Introduction to topology	O	6	
				MA30231	Projective geometry	O	6	
				MA40037 MA40054	Galois theory (in even years) Representation theory of finite groups (in odd years)	O	6	
				MA40050	Numerical optimisation and large scale systems	O	6	
				MA40256	Analysis in Hilbert Spaces	O	6	

Programmes in Computer Information Systems (BSc)

Programme code	USCM-AFB11
Programme title:	**BSc (hons) Computer Information Systems**
Award type:	Bachelor of Science with Honours
Mode of Attendance / Length	Full time – 3 years
Designated Alternative Programme (DAP):	None
Approving body and date of approval:	Faculty of Science T & Q Committee (15/06/07)

Programme code:	USCM-AKB12
Programme title:	**BSc (hons) Computer Information Systems (with Professional Placement)**
Award type:	Bachelor of Science with Honours
Mode of Attendance / Length	Thick Sandwich – 4 years
Designated Alternative Programme (DAP):	None
Approving body and date of approval:	Faculty of Science T & Q Committee (15/06/07)

Programme code:	USCM-AAB12
Programme title:	**BSc (hons) Computer Information Systems (with Study Year Abroad)**
Award type:	Bachelor of Science with Honours
Mode of Attendance / Length	Full time – 4 years
Designated Alternative Programme (DAP):	None
Approving body and date of approval:	Faculty of Science T & Q Committee (15/06/07)

Years 1, 2 and 3 of these programmes not available in 2017/18.

Part	Stage	Period of study	Unit code	Unit title	Unit status	Credits	DEU status
3	4	AY	CM30082	Individual Project	C	24	DEU
		S1	CM30072	Safety-critical Computer Systems	C	6	
			CM30078	Networking	C	6	
			MN20032	E-business	C	6	
			MN30281	Privacy, Trust and Security in Information Systems	C	6	
		S2	CM30141	Advanced Human Computer Interaction	C	6	
			MN30270	Virtual Organising	C	6	
			MN30475	Sustainable Operations Management	C	6	

(Table header: Final Year – Computer Information Systems (includes with Prof Placement / Study Year Abroad))

Programmes in Computer Science (MComp)

Programme code	USCM-AFM01
Programme title:	MComp (hons) Computer Science
Award type:	MComp with Honours
Award title:	
Mode of Attendance:	Full time
Length:	4 Years
State if coexistent M-level programme:	
State any designated alt prog(s):	BSc(Hons) Computer Science
Approving body and date of approval:	Faculty of Science T & Q Committee (15/06/05)

Programme code:	USCM-AKM02
Programme title:	MComp (hons) Computer Science (with Placement)
Award type:	MComp with Honours
Award title:	
Mode of Attendance:	Thick sandwich
Length:	5 Years
State if coexistent M-level programme:	
State any designated alt prog(s):	BSc (Hons) Computer Science with Placement
Approving body and date of approval:	Faculty of Science T & Q Committee (15/06/05)

Programme code:	USCM-AFM02
Programme title:	MComp (hons) Computer Science (with Study Year Abroad)
Award type:	MComp with Honours
Award title:	
Mode of Attendance:	Full time
Length:	5 Years
State if coexistent M-level programme:	
State any designated alt prog(s):	BSc(Hons) in Computer Science with Study Year Abroad
Approving body and date of approval:	Faculty of Science T & Q Committee (15/06/05)

Year 1								
Pa rt	Stage	Normal period of study for this Mode		Unit code	Unit title	Unit statu s	Credits	DEU statu s
1	1	Yr 1	AY	CM10251	Computing as a Science and Engineering discipline	C	12	
			S1	CM10227	Principles of programming 1	C	12	DEU
				CM10194	Computer systems architecture 1	C	6	
				CM10196	Discrete mathematics for computation	C	6	
			S2	CM10228	Principles of programming 2	C	12	DEU
				CM10195	Computer systems architecture 2	C	6	
				CM10197	Analytical mathematics for applications	C	6	

Year 2								
Pa rt	**Stage**	**Normal period of study for this Mode**		**Unit code**	**Unit title**	**Unit statu s**	**Credits**	**DEU statu s**
2	2	Yr 2	AY	CM20257	Integrated Group Based Project	C	6	
				CM20216	Designing Interactive Systems	C	12	
			S1	CM20217	Foundations of Computation	C	6	
				CM20219	Fundamentals of Visual Computing	C	6	
				CM20254	Datastructures and Algorithms	C	6	
				CM20255	Databases	C	3	
			S2	CM20220	Fundamentals of Pattern Analysis	C	6	
				CM20256	Functional Programming	C	6	
				CM20252	Artificial Intelligence	C	6	
				CM20253	Comparative Programming Languages	C	3	
Year 3 for USCM-AAM02								
Pa rt	**Stage**	**Normal period of study for this Mode**		**Unit code**	**Unit title**	**Unit statu s**	**Credits**	
2	3	Yr 3	AY	CM201 06	Study abroad	C	60	

Year 3 for USCM-AKM02						
Part	Stage	Normal period of study for this Mode		Unit code	Unit title	Unit status	Credits
2	3	Yr 3	AY	CM201 05	Industrial placement	C	60

For 2017/18 onwards new students will only be able to undertake their placement in Year 4.

Year 3 for USCM-AFM01 and Year 4 for USCM-AAM02 and USCM-AKM02								
Part	Stage	Normal period of study for this Mode		Unit code	Unit title	Unit status	Credits	DEU status
2	3/4	Yr 3 or Yr 4	AY	CM30082	Individual project	C	24	DEU
			S1	Students must take units totalling 30 credits in each semester. Select 2 or 3 units from the following list:				
				CM30078	Networking	O	6	
				CM30070	Computer algebra	O	6	
				CM30072	Safety-critical computer systems	O	6	
				CM30171	Compilers	O	6	
				CM30174	Intelligent agents	O	6	
				CM30225	Parallel computing	O	6	
				Modern language units are only available to students who have studied the language within additional units in years 1 and 2 or with DoS-approval and must be studied at a level appropriate to prior language qualifications and skills				
				Select 0 or 1 units from the following list:				
				FL30277	Approved language option (Foreign Languages Centre)	O	6	
				MN20074	Business information systems	O	6	
				ZZ30001	Director of Studies approved unit	O	6	
			S2	Students must take units totalling 30 credits in each semester. Select 2 or 3 units from the following list:				

				CM30073	Advanced computer algorithms & complexity	O	6	
				CM30075	Advanced computer graphics	O	6	
				CM30080	Computer vision	O	6	
				CM30141	Theory of human computer interaction	O	6	
				CM30173	Cryptography	O	6	
				CM30226	Logic and semantics of programming languages	O	6	
				CM30229	Intelligent control and cognitive systems	O	6	

Modern language units are only available to students who have studied the language within additional units in years 1 and 2 or with DoS-approval and must be studied at a level appropriate to prior language qualifications and skills.

Select between 0 and 1 Unit(s) from the following list:

				FL30278	Approved language option (Foreign Languages Centre)	O	6	
				MN30076	Business strategy	O	6	
				ZZ30004	Director of Studies approved unit	O	6	

Year 4 for USCM-AFM01 and Year 5 for USCM-AAM02 and USCM-AKM02

Part	Stage	Normal period of study for this Mode		Unit code	Unit title	Unit status	Credits	DEU status
3	4 or 5	Yr 4 or Yr 5	AY	CM40178	Research project	C	30	DEU
			S1	Optional units: select either 2 6-credit units or one 12-credit unit from the following list: CM50121, CM50123 and CM50206 may only be taken if, respectively, CM30072, CM30078 or CM30174 was not. Students choosing CM50244, or CM50248 should note the teaching structure of the units. CM50264, XX50215 and EE40098.				
				CM50121	Safety critical systems	O	6	
				CM50123	Networking	O	6	
				CM50200	Mobile and pervasive systems	O	6	

				CM50206	Intelligent Agents	O	6	
				CM50244	Computer animation and games I	O	6	
				CM50248	Visual Understanding I	O	6	
				CM50264	Machine Learning 1	O	6	
				EE40098	Computational intelligence	O	6	
				ZZ40001	DoS-approved unit	O	6	
			S2	CM40179	Entrepreneurship	C	6	
				Optional units: select either 2 6-credit units or one 12-credit unit from the following list: CM50205, CM50210 and CM50230 may only be taken if, respectively, CM30141, CM30173 or CM30229 was not. Students choosing CM50245 or CM50249 should note the teaching structure of the units.				
				CM40149	Collaborative systems	O	6	
				CM50150	Interactive communication design	O	6	
				CM50205	Theory of Human Computer Interaction	O	6	
				CM50209	Security and integrity	O	6	
				CM50210	Cryptography	O	6	
				CM50230	Intelligent control and cognitive systems	O	6	
				CM50245	Computer Animation and Games 2	O	12	
				CM50249	Visual Understanding 2	O	12	
				ZZ40020	DoS-approved unit	O	6	

Programmes in Computer Science and Mathematics (MComp and Math)

Programme code	USCM-AFM14
Programme title	MComp (Hons) Computer Science and Mathematics
Award type	Master of Computing with honours
Award title	Master of Computing in Computer Science and Mathematics
Mode of Attendance	Full time
Length	4 years
State if coexistent M-level programme	
State any designated alternative programme(s)	BSc (Hons) Computer Science and Mathematics
Approving body and date of approval	Faculty of Science FLTQC (15/06/05) and 26.10.11

Programme code	USCM-AKM14
Programme title	MComp (Hons) Computer Science and Mathematics with Year long work placement
Award type	Master of Computing with honours
Award title	Master of Computing in Computer Science and Mathematics
Mode of Attendance	Full time with Thick Sandwich Placement
Length	5
State if coexistent M-level programme	
State any designated alternative programme(s)	BSc(Hons) Computer Science and Mathematics
Approving body and date of approval	Faculty of Science FLTQC (15/06/05) and 26.10.11

Programme code	USCM-AAM14
Programme title	MComp (Hons) Computer Science and Mathematics with Study Year Abroad
Award type	Master of Computing with honours
Award title	Master of Computing in Computer Science and Mathematics
Mode of Attendance	Full time with Study Year Abroad
Length	5 years
State if coexistent M-level programme	
State any designated alternative programme(s)	BSc(Hons) Computer Science and Mathematics with Study Year Abroad
Approving body and date of approval	Faculty of Science FLTQC (15/06/05) and 26.10.11

Year 1								
Part	Stage	Normal period of study for this Mode		Unit code	Unit title	Unit status	Credits	DEU status
1	1	Yr1	AY	MA10207	Analysis 1	C	12	
				CM10251	Computing as a Science and Engineering discipline	C	12	
			S1	CM10227	Principles of programming 1	C	12	DEU
				MA10209	Algebra 1A	C	6	
			S2	CM10228	Principles of programming 2	C	12	DEU
				MA10210	Algebra 1B	C	6	

Year 2								
Part	Stage	Normal period of study for this Mode		Unit code	Unit title	Unit status	Credits	DEU status
2	2	Yr2	AY	CM20257	Integrated Group Based Project	C	6	

			S1	Students have a choice in each semester, with Datastructures and Algorithms requisite for Artificial Intelligence, and with Graphics requisite for Pattern Analysis.			
				CM20217	Foundations of Computation 1	C	6
				CM20219	Fundamentals of Visual Computing	O	6
				CM20254	Datastructures and Algorithms	O	6
				CM20255	Databases	C	3
				MA20216	Algebra 2A	C	6
				MA20218	Analysis 2A	C	6
			S2	CM20256	Functional Programming	C	6
				CM20220	Fundamentals of Pattern Analysis	O	6
				CM20252	Artificial Intelligence	O	6
				CM20253	Comparative Programming Languages	C	3
				MA20217	Algebra 2B	C	6
				MA20219	Analysis 2B	C	6

Year 3 for USCM-AAM14

Part	Stage	Normal period of study for this Mode		Unit code	Unit title	Unit status	Credits
2	3	Yr3	AY	CM20106	Study abroad	C	60

Year 3 for USCM-AKM14

Part	Stage	Normal period of study for this Mode		Unit code	Unit title	Unit status	Credits
2	3	Yr3	AY	CM20105	Industrial placement	C	60

For 2017/18 onwards new students will only be able to undertake their placement in Year 4.

Year 3 for USCM-AFM14 and Year 4 for USCM-AAM14 and USCM-AKM14								
Part	Stage	Normal period of study for this Mode		Unit code	Unit title	Unit status	Credits	DEU status
2	3 or 4	Yr3 /4	AY	CM30082	Individual project	C	24	DEU
			S1	Optional units – select either 2 CM units and 1 MA unit OR one CM unit and two MA units from this list: Students must select options to include 3 CM units and 3 MA units across this year of the programme. Unit CM30070 from this list counts as either CM or MA. ZZ30019 can count as either CM or MA (no matter which department runs it). Student must check the Mathematical Sciences teaching timeslots when choosing units in S1 and S2. To minimise clashes you should not choose more than one unit from each timeslot within the same semester.				
				CM30070	Computer algebra	O	6	
				CM30078	Networking	O	6	
				CM30174	Intelligent agents	O	6	
				CM30225	Parallel computing	O	6	
				ZZ30019	Director of Studies approved unit	O	6	
				MA30039	Differential geometry of curves & surfaces	O	6	
				MA20222	Numerical analysis	O	6	
				MA30087	Optimisation methods of operational research	O	6	
				MA30237	Group theory	O	6	
				MA40238 MA40188	Number theory (in even years) Algebraic curves (in odd years)	O	6	
				MA40254	Differential and geometric analysis	O	6	

			S2	Optional units – select either 2 CM units and 1 MA unit OR one CM unit and two MA units from this list:				
				Students must select options to include 3 CM units and 3 MA units across this year of the programme. Unit CM30073, CM30173 and CM30226 from this list count as either CM or MA. ZZ30020 can count as either CM or MA (no matter which department runs it).				
				CM30073	Advanced algorithms and complexity	O	6	
				CM30075	Advanced Computer Graphics	O	6	
				CM30080	Computer vision	O	6	
				CM30173	Cryptography	O	6	
				CM30226	Logic and semantics of programming languages	O	6	
				CM30229	Intelligent control and cognitive systems	O	6	
				ZZ30020	Director of Studies approved unit	O	6	
				MA30055	Introduction to topology	O	6	
				MA30231	Projective geometry	O	6	
				MA40037	Galois Theory (in even years)	O	6	
				MA40054	Representation Theory of finite groups (in odd years)			
				MA40256	Analysis in Hilbert spaces	O	6	

Part	Stage	Normal period of study for this Mode		Unit code	Unit title	Unit status	Credits	DEU status
Year 4 for USCM-AFM14 and Year 5 for USCM-AAM14 and USCM-AKM14								
3	4 or 5	Yr4 /5	AY	XX40211	Research project	C	18	DEU
			S1	Optional units – select either 18 or 24 credits worth of units from this list: Students must select at least 2 CM units and at least 2 MA units across the year of the programme. ZZ40019 can count as CM or MA (no matter which department runs it). CM50123 and CM50206 may only be taken if, respectively, CM30078 or CM30174 was not. Students choosing CM50244 or CM50248 should note the teaching structure of the units Students must check the Mathematical Sciences teaching timeslots when choosing units in S1 and S2. To minimise clashes you should not choose more than one unit from each timeslot within the same semester.				
				CM50123	Networking	O	6	
				CM50200	Mobile and pervasive systems	O	6	
				CM50206	Intelligent Agents	O	6	
				CM50244	Computer Animation and Games I	O	6	
				CM50248	Visual Understanding I	O	6	
				CM50264	Machine Learning 1	O	6	
				XX50215	Stats for data science	O	6	
				ZZ40019	Director of Studies approved unit	O	6	
				MA40040	Algebraic topology	O	6	
				MA40042	Measure theory & integration	O	6	
				MA40043	Real & abstract analysis	O	6	

	MA40254	Differential and geometric analysis	O	6	
	MA40238	Number theory (in even years)	O	6	
	MA40188	Algebraic curves (in odd years)			
S2	CM40179	Entrepreneurship	C	6	

Optional units – select either 12 or 18 credits worth of units from this list. The total number of credits for the year must sum to 60.

ZZ40020 can count as CM or MA (not matter which department runs it).

CM50210 may only be taken if CM30173 was not. It may be counted as an MA unit.

Students may only choose a MA3xxxx unit if they have done a MA4xxxx unit in Year 3.

Students choosing CM50245 or CM50249 should note the teaching structure of the units.

CM40149	Collaborative systems	O	6	
CM50150	Interactive communication design	O	6	
CM50209	Security and Integrity	O	6	
CM50210	Cryptography	O	6	
CM50245	Computer Animation and Games 2	O	12	
CM50249	Visual Understanding 2	O	12	
ZZ40020	Director of Studies approved unit	O	6	
MA30055	Introduction to topology	O	6	
MA30231	Projective geometry	O	6	
MA40050	Numerical optimisation	O	6	
MA40057	Functional analysis	O	6	
MA40177	Scientific computing	O	6	
MA40256	Analysis in Hilbert spaces	O	6	

				MA40203	Theory of partial differential equations	O	6	
				MA40037 MA40054	Galois Theory (in even years) Representation Theory of finite groups (in odd years)	O	6	

Calculating Your Degree Classification under the NFAAR

BSc(Hons) Computer Science Programmes Full Time or with a Placement Year

Assessment weightings and decision references		
Stage	Weighting within programme	**NFAAR-UG decisions reference** *See **NFAAR-UG** information at*: www.bath.ac.uk/registry/nfa
1	0 %	Main assessment: Appendix 11 Supplementary assessment: Appendix 12
2	32 %	Main assessment: Appendix 11 Supplementary assessment: Appendix 12
3	0 %	Main assessment: Appendix 11 Supplementary assessment: Appendix 12
4	68 %	Main assessment: Appendix 27 Supplementary assessment: Appendix 28

BSc (hons) Computer Science Programmes with a Study Year Abroad

Assessment weightings and decision references		
Stage	Weighting within programme	**NFAAR-UG decisions reference** *See **NFAAR-UG** information at*: www.bath.ac.uk/registry/nfa
1	0 %	Main assessment: Appendix 11 Supplementary assessment: Appendix 12
2	24 %	Main assessment: Appendix 11 Supplementary assessment: Appendix 12
3	8 %	Main assessment: Appendix 11 Supplementary assessment: Appendix 12
4	68 %	Main assessment: Appendix 27 Supplementary assessment: Appendix 28

MComp (hons) Computer Science Full Time or with a Placement Year

Assessment weightings and decision references		
Stage	Weighting within programme	**NFAAR-UG decisions reference** *See NFAAR-UG information at:* www.bath.ac.uk/registry/nfa
1	0 %	Main assessment: Appendix 11 Supplementary assessment: Appendix 12
2	16 %	Main assessment: Appendix 11 Supplementary assessment: Appendix 12
3	0%	Main assessment: Appendix 11 Supplementary assessment: Appendix 12
4	34%	Main assessment: Appendix 11 Supplementary assessment: Appendix 12
5	50 %	Main assessment: Appendix 27 Supplementary assessment: Appendix 28

MComp (hons) Computer Science with a Study Year Abroad

Assessment weightings and decision references		
Stage	Weighting within programme	**NFAAR-UG decisions reference** *See NFAAR-UG information at*: www.bath.ac.uk/registry/nfa
1	0 %	Main assessment: Appendix 11 Supplementary assessment: Appendix 12
2	8%	Main assessment: Appendix 11 Supplementary assessment: Appendix 12
2	8%	Main assessment: Appendix 11 Supplementary assessment: Appendix 12
3	34 %	Main assessment: Appendix 11 Supplementary assessment: Appendix 12
4	50 %	Main assessment: Appendix 27 Supplementary assessment: Appendix 28

Further information
Section in this Handbook on **Assessment**. Definitions of assessment terms: www.bath.ac.uk/registry/nfa/nfaar-ug-appendix-02.pdf