



University of Glasgow | School of Computing Science



Undergraduate Class Guide

2018-19

PREFACE

This guide is intended to act as a single source of essential and useful undergraduate information for the School of Computing Science. This document contains links to information that is available on Moodle, but generally does not duplicate such information. The document is divided into two sections as follows:

- Part I contains general information relevant to Undergraduate students at all levels, and should be considered **essential** reading for all students.
- Part II provides level-specific information for each level of the different undergraduate programmes and explains the Progression Pathways which will be particularly useful for advisers and students considering their enrolment options.

DISCLAIMER

Although the information contained in this document is believed to be accurate, changes in circumstances may require modifications to the content and delivery of some courses during the year.

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PART I: GENERAL INFORMATION

1 THE UNIVERSITY OF GLASGOW & THE SCHOOL OF COMPUTING SCIENCE

The University of Glasgow, founded in 1451, is the second oldest university in Scotland and the fourth oldest in the English speaking world. With over 25,000 students, it is also one of the largest and offers study in a wide range of subjects at all levels in four Colleges. The University is set in the West End of Glasgow, one of the world's outstanding cities confirmed by being European City of Culture 1990, City of Architecture 1999 and host of the Commonwealth Games 2014.

Computing Science is a young and exciting discipline which is rapidly evolving. It includes, amongst other things, theoretical studies, experimental investigations in areas ranging from human-computer interaction to network performance, and practical engineering challenges in designing and implementing safe, efficient and reliable software. Teaching is provided by computing scientists at the forefront of research. We are proud of the high standards in our programmes which are informed by our leading edge research, Computing Science is top in Scotland for impact, and rated 6th in the UK for research intensity in the 2014 Research Excellence Framework¹.

Our computing science students have reported high satisfaction levels in each year of the National Student Survey, we are ranked 10th in the UK in the Complete University Guide 2017 league table², 19th in the Guardian League Table³ and are in the top 100 in the QS World University Rankings by Subject 2015⁴. Graduates are professional practitioners, equipped to embark on their careers with a solid foundation, breadth of knowledge, and be multi-lingual in programming languages.

With 38 academic staff, 7 Research Fellows, 32 research staff and more than 100 research students, we host over 130 externally funded research projects with a value of approximately £3m each year. Our teaching excellence is evidenced by our ranking as top or joint top in overall satisfaction in the National Student Survey in four of the last seven years.

The School of Computing Science is in partnership with Singapore Institute of Technology to offer the Bachelor of Science (Honours) in Computing Science. This collaborative programme is a broad computing science programme whose main themes are connectivity, mobility and usability.

¹ <http://www.ref.ac.uk/>

² <http://www.thecompleteuniversityguide.co.uk/league-tables/rankings?s=Computer+Science>

³ <http://www.theguardian.com/education/ng-interactive/2015/may/25/university-league-tables-2016#S220>

⁴ <http://www.topuniversities.com/node/2495/ranking-details/world-university-rankings/2014>

1.1 ACRONYMS USED IN THIS GUIDE

UG: University of Glasgow

UGS: University of Glasgow, Singapore

Level 3 Programmes:		Level 4 Programmes:	
CS3H/CS3M	Single Honours Computing Science	CS4H/CS4M	Single Honours Computing Science
SE3H/SE3M	Software Engineering Honours	SE4H/SE4M	Software Engineering Honours
SEWP3M	Software Engineering with Work Placement Masters	CS4H+	Combined Honours (with Computing Science)
CS3H+	Combined Honours (with Computing Science)	ESE4H	Electronic Software Engineering Honours
ESE3H	Electronic Software Engineering Honours	INF4H/INF4M	Single Honours Informatics
CS3	Designated Computing Science		
CS3+	Combined Designated Degree (with Computing Science)		

The suffixes 'H' and 'M' in these abbreviations indicate BSc and MSci respectively

The School of Computing Science is part of the College of Science and Engineering. It is located in the Sir Alwyn Williams Building (SAWB) together with the adjacent houses 10 – 17 of Lilybank Gardens (LBG).

The UG Teaching Office

Teresa Bonner, Helen Border, Susan McArthur, Gail Reat
Room F161
17 Lilybank Gardens
Glasgow
G12 8RZ
Office Hours: 8.30 a.m. – 4.30 p.m. (Monday to Friday)

The UGS Teaching Office

Sheila Devi Rajoo, Administrative Officer
43 Woodlands Avenue 9
SIT Building@RP, #08-19 (Republic Polytechnic Campus)
Singapore 738964
Office Hours: 9 am - 5 pm (Monday to Friday)

1.2 LOCATION OF UG COMPUTING SCIENCE LABS

University of Glasgow Undergraduate Labs			
Level	Laboratory	Level	Laboratory
1	BO 715	2	BO 706
3 & 4 honours lab	BO 720	3 & 4 honours lab	BO 616 (BO 618 flexible space, BO 620 honours lab)

1.3 IMPORTANT WEBSITES

SocsOnline Website (Sign Own Work Forms, Get Coursework Bands, Apply for Extensions)	https://studentltc.dcs.gla.ac.uk/ (This link is accessible from Campus and from the University's VPN)
Moodle (Course information and lecture notes)	moodle2.gla.ac.uk
Ethics Approval for Projects (see Section 4.2)	www.dcs.gla.ac.uk/ethics
MyCampus (see Section 3.1)	www.gla.ac.uk/students/myglasgow
Library (Books, Exam Papers)	www.gla.ac.uk/services/library
Programme Specifications (see Part II)	www.gla.ac.uk/services/senateoffice/programmesearch
Complaints (See Section 5.1)	www.gla.ac.uk/services/senateoffice/studentcodes/students/complaints
Code of Assessment (see Appendix C)	www.gla.ac.uk/services/senateoffice/policies/assessment/codeofassessment
University IT Regulations	www.gla.ac.uk/services/it/regulationscommitteesandpolicies
University Fees and General Information for Students	www.gla.ac.uk/services/senateoffice/policies/calendar
Academic Appeals	www.gla.ac.uk/services/senateoffice/studentcodes/students/academicappeals
University Policies	www.gla.ac.uk/services/senateoffice/policies/
Enrolment	www.glasgow.ac.uk/enrolment
Examinations	www.glasgow.ac.uk/exams
Graduations	www.glasgow.ac.uk/graduation
Registration	www.glasgow.ac.uk/registration
Tier 4 Visa	www.glasgow.ac.uk/tier4
Student finance	www.glasgow.ac.uk/registry/finance
Financial Aid	www.glasgow.ac.uk/registry/finance/funds
US federal loans	www.glasgow.ac.uk/registry/finance/federalloans
Registry contacts	www.glasgow.ac.uk/registry/contact
Sources of Help (See Section 11.7)	
Student Counselling Advisory Service	www.gla.ac.uk/services/counselling/
International Students Adviser	www.gla.ac.uk/international/support/
Chaplaincy Centre	www.gla.ac.uk/services/chaplaincy
Student Disability Service	www.gla.ac.uk/services/disability/

2 UNDERGRADUATE DEGREES

The School of Computing Science offers a variety of degrees. Students study a broad range of core topics, and will be encouraged to discover the connections among these topics and to understand their common theoretical foundations. Breadth is provided in the Honours programme by the level-3 courses; depth by the level-4 courses; and practical experience by projects and coursework. The professional aim of the programme is to produce graduates fit to occupy responsible positions in the information technology industry.

Each programme is composed of a number of courses. **Individual course descriptions, including pre-and co-requisites, are published in the appropriate course description on Moodle** and on MyCampus. To enter a particular course a student must either fulfil the requirements of the appropriate Computing Science programme, and fulfil all of the pre-and co-requisites for the course.

CS: SINGLE HONOURS COMPUTING SCIENCE (UG & UGS)

This is the most general Honours degree in Computing Science and attracts the largest number of students. The wide range of available courses enables a choice of specialisation in different aspects of computing in the levels 3 and 4. This programme will:

- Provide you with a deep understanding of the theory and practice of computing
- Give you the opportunity to study a broad range of core computing science topics
- Encourage you to discover the connections among these topics and to understand their common theoretical foundations
- Prepare you to occupy responsible positions in the information technology industry
- Enable you to study selected topics in considerable depth thereby equipping you to enter research programmes
- Emphasise unchanging principles in computing science
- Encourage independent study habits that will stand you in good stead throughout your professional career
- Enable you to enhance your transferable and interpersonal skills, particularly written and oral communication and team working

This programme thus introduces the concept of a named strand, allowing the student, if they choose to specialise in their chosen area from the third year onwards. Students will be given guidance with respect to particular course choices for particular specialisms.

SE: SINGLE HONOURS SOFTWARE ENGINEERING

This similar, but more specialised, degree focuses on software engineering principles, practices, methods and tools in the level 3 Team Project and subsequently in the choice of Level 4 Electives and Individual Project. It includes a formally supervised and assessed industrial summer placement between Level 3 and Level 4. Entry is competitive at the end of level 2 due to the limited availability of these placements.

ESE: JOINT HONOURS ELECTRONIC & SOFTWARE ENGINEERING

This degree combines study of both hardware and software and is taught jointly with the School of Engineering. Students come into this programme to achieve a BEng or MEng degree or to achieve a BSc degree. In level 3 students' study prescribed courses in software engineering and electronics together with an integrated Team Project, and in level 4 take a choice of final year software engineering and electronics electives. BSc and BEng students undertake a level 4 project in software engineering or electronics. Well-qualified students may transfer to undertake the 5 year MEng.

COMBINED HONOURS (WITH COMPUTING SCIENCE)

There are a number of Combined Honours degree programmes, each of which is contributed to equally by the two Schools concerned. In the last couple of years we have had combined Honours degrees with Maths, Applied Maths, Physics, French, Business & Management, Music and Philosophy.

DESIGNATED DEGREE IN COMPUTING SCIENCE

The Designated degree is taught over 3 years, as opposed to the 4 taken for Honours. The curriculum is similar to that taken by Honours students, but has somewhat less depth and breadth. During their third year, students must take a prescribed 80 credits of level 3 CS courses.

MSci IN COMPUTING SCIENCE OR SOFTWARE ENGINEERING, OR CS COMBINED

These are extensions to the current Honours programmes which:

- equip students with an advanced and systematic understanding of selected areas of Computing Science, Software Engineering, Mobile Software Engineering and Informatics
- provide the skills necessary to pursue independent research
- prepare students for an academic or industrial research career

Entry is competitive at the end of level 4 due to the limited number of research projects available. It may also be possible for well-qualified students to transfer to the MSci at the end of Level 4. It is also possible to undertake a combined MSci degree with Mathematics, Applied Mathematics or Physics.

SEWP: MSci IN SOFTWARE ENGINEERING WITH WORK PLACEMENT

This degree is an enhancement of the Software Engineering degree which enables students to undertake an assessed full year work placement in Level 4. Students return in Level 5 to take an advanced programme of courses and graduate with an MSci Degree. Students are continually assessed while on placement and participate in skills development workshops.

3 STUDENT RESPONSIBILITIES (UG & UGS)

3.1 MYCAMPUS

MyCampus is the University of Glasgow's student information system that is used by students throughout the year. You should have received the information required to log in to MyCampus. MyCampus provides the following functionality at different periods of the year.

3.1.1 ENROLLING

- Formally register with the University of Glasgow
- View and change your details. If any of your personal details change after you have registered with the University (i.e. change of permanent or term address, status, etc.); please remember to update this information
- Choose courses and view your timetable. It is your responsibility to familiarise yourself with your timetable i.e. times and venues of your classes

Students in levels 3, 4 and 5 who have a choice of courses are required to register their choice in MyCampus by the second week of each semester. Courses cannot subsequently be changed without the approval of the Year Head.

3.1.2 DURING THE YEAR

- Submit or report your absenteeism if your studies are affected by illness or personal difficulties. Please refer to Student Absence Policy. See also Section 11

3.1.3 AFTER EXAMS

- Results may only be released by Registry. The School is not allowed to provide results
- Compare your results with progress regulations so that you can see whether you need to take resits

3.2 COMMUNICATION

The internal web pages, accessible via Moodle, contain a range of useful information, including course descriptions and meetings and announcements of various kinds. Most course coordinators will use the web to make course information and materials available. Minutes of Staff/Student meetings can be found on Student Voice at the following link:

https://sharepoint.gla.ac.uk/students/myglasgow/_layouts/StudentVoice/DiscussionBoard.aspx?RepGroupId=133&m=Disc&Filter=All

Email is the primary means of communication within the School in general and between the teaching administration office and students in particular. To avoid missing important information, **students should ensure they check their e-mails regularly.**

Read your email daily

The email facilities are also available for personal use but only if they are not abused. *Under no circumstances use the facilities for spam.* The University reserves the right to monitor data communications, as permitted by the relevant legislation and [University regulations](#)⁵.

3.3 ADVISERS OF STUDIES

Each student is allocated an Adviser of Studies who provides advice throughout the year. You can see who your adviser is on MyCampus. It is essential that students keep their Adviser of Studies fully informed of all academic problems as well as personal or medical problems which might possibly affect academic progress. Your Adviser will treat anything you tell them in complete confidence, and if necessary may refer you to one of the many student advice and counselling services available at your site.

If you do wish to see your Adviser at any point in the year, you should make an appointment by contacting them directly. It is also possible that your Adviser (or other officers) may need to contact you. **Please keep your contact details on MyCampus up to date**, and check your emails regularly.

3.4 STAFF-STUDENT COMMITTEES

The *Staff-Student Committee* (SSC) at each level is a forum for discussion between staff and students on the structure, aims, objectives, content, assessment methods, and delivery of the programme, as well as related matters such as equipment. The detailed list of matters that are within the remit of the staff-

⁵ <http://www.gla.ac.uk/services/it/regulationscommitteesandpolicies>

student committee is called the [Terms of Reference](#)⁶. Normally there will be one formal meeting of each SSC each semester.

The class representatives (class rep) will be informed, by email, of the scheduled times for these meetings, it will also be announced on Moodle. You should contact one of your class representatives before the meetings if you have any matters that you would like them to raise. Contact details will be provided on the relevant Moodle pages and also on Student Voice.⁷

During the early weeks of the year you will select class representatives who receive training from the SRC and represent your views on Staff-Student Liaison Committees. The role of these students is very important and it's imperative that you let them know when things are going well and not so well with your studies so that they can keep the School informed on everything from teaching to facilities, to help ensure that there is continuous improvement. You should think carefully about whether you would like to undertake the role of class rep. As well as providing valuable experience, including CV points, such participation will be recorded on your academic transcript, subject to the completion of SRC training (which lasts half a day). Further information both about becoming a class rep and what to expect from your class rep can be found on Student Voice.

The SRC Vice President (Education) oversees the whole class representative system, including providing the training, and also represents the views of all students to the University on a variety of Committees. If you have a matter relating to education, either within the University or beyond, which you feel requires attention, do not hesitate to get in touch via vp-education@src.gla.ac.uk or by dropping in to the SRC offices at 65-67 Southpark Avenue.

3.5 COURSES & LECTURES

You are strongly advised to attend **all** lectures for your courses. We have observed a strong correlation between lecture attendance and course pass rates. Merely attending lectures significantly increases your chances of passing. Do not be tempted to cut classes in order to complete assessed coursework or work on your project. In the long run you will lose out by having to spend extra time mastering the work. ***Do not expect lecturers or tutors to explain material to you just because you have chosen not to attend the relevant lecture(s). International students on a student visa must attend classes regularly and maintain a minimum attendance requirement.***

UGS Students: Please refer to the SIT Student Handbook or www.ica.gov.sg on how to apply for a student pass.

Lecturers will sometimes provide copies of handouts at lectures, but these **do not** usually comprise a complete record of the course, and you should expect to take additional notes during lectures. The policy on availability of course materials, other than at the appropriate lecture, is at the discretion of individual course teams. PDF versions of the lecture notes will often be made available on the appropriate Moodle page after the lecture so that you can print it out should you miss a lecture due to ill health. The Teaching Office (UG) & University of Glasgow Office (UGS) **do not** have copies of the handouts. The use of laptops in lectures is at the lecturer's discretion (aside from students with disabilities).

⁶ www.glasgowstudent.net/about/representation/class-reps/resources/

⁷ sharepoint.gla.ac.uk/students/myglasgow/_layouts/StudentVoice/About.aspx

3.5.1 *RECORDING LECTURES*

You may record lectures for your own personal use under the following conditions:

- You must personally ask the lecturer if they mind having their lectures recorded, and get their permission. If the lecturer does not give permission you should respect that and not record the lectures.
- The recording is for your use only. If recordings are distributed on the web, or uploaded to YouTube or similar services, this will be considered a disciplinary offence.
- Please note that lecture recordings and ALL course materials provided are for your own personal use and can only be used in relation to your studies. Any unauthorised distribution of course materials, including uploading them onto unauthorised web sites and social media sites, such as YouTube or Course Hero, will be considered in breach of the code of conduct and will be subject to disciplinary action.

3.5.2 *QUESTIONNAIRES*

Towards the end of each course you will be asked to complete an electronic questionnaire. These provide the most comprehensive opportunity for both positive and negative feedback about a course, so please take this exercise seriously. This helps us to identify what is working well and what problems require to be addressed for the following semester.

3.5.3 *STUDENTS WITH DISABILITIES*

The Student Disability Service recommends that certain students who have registered with the Service receive lecture notes in advance of the lectures. In the case of courses where lecture notes are normally handed out, such students may request to receive the notes in advance; every reasonable effort will be made to satisfy such requests. Students should contact the Teaching Office about this.

3.5.4 *CONTACT WITH STAFF*

You may wish to meet with a lecturer or tutor to discuss aspects of a course. Members of staff have their own policies for organizing meetings with students: some advertise office-hours for this purpose, whilst others are happy to meet with students by appointment. In the latter case, you are advised to avoid dropping in without an appointment unless there is no alternative. If it is not possible to speak to the staff member after a lecture or tutorial, the best solution may be to request a meeting by email. You should include times when you are available, together with a brief indication as to the nature of your query.

3.5.5 *MOODLE*

Familiarise yourself as soon as possible with the online learning environment Moodle. Students should be automatically enrolled in Moodle they enrol for a course on MyCampus. However, enrolment to the relevant Moodle pages can take up to 48 hours from when you enrol for the course on MyCampus. If, after this time, you still cannot access your courses on Moodle you should contact the IT helpdesk.⁸ It is very important to ensure that you are registered for your courses on Moodle as important information will be posted there (lecture notes, tutorial and laboratory sheets, course descriptors, deadlines, regulations, etc.). Information on the recommended texts for each course is available on the Moodle web page for that course.

⁸ www.gla.ac.uk/services/it/helpdesk/

It is **very important** that you find out how to access the Moodle resources⁹ as soon as possible – there is a chance that you will miss out on important information otherwise.

3.5.6 ATTENDANCE MONITORING

The University requires us to monitor student attendance during teaching periods. This requirement is implemented in different ways at different levels – via laboratory attendance and/or lectures at Levels 1 and 2, and via meetings with project supervisors at Levels 3, 4 and 5. Absences of two or more consecutive weeks without good cause will result in action being taken. The university also has a duty of care to students, which is monitored by attendance at lectures or laboratory sessions. The main aim of this procedure is to ensure that you are given an opportunity to provide an explanation for the absence. The ultimate sanction is withdrawal from the University by Registry if no acceptable explanation for continued absence is received. However, you should be aware that, as long as you keep the School informed of any legitimate absence, the Attendance Monitoring policy need not be a cause for concern. Students are required to submit an absence notification on MyCampus to cover any absence they have from their studies. If the absence is more than 7 days, or if you miss any coursework, examination or mandatory lecture/tutorial, you are required to submit a notification of good cause on MyCampus along with any appropriate supporting evidence within 7 days of the deadline/exam. Notifications of good cause submitted out with this time may not be considered. The procedures to follow in the case of absence and good cause are described in Section 11 of Part I of this document. See the following link:

www.gla.ac.uk/services/senateoffice/academic/recentpolicyagreements/monitoringstudentattendance/

Course Delivery

1.1 Attendance Monitoring in Level 1 and 2 Labs/Tutorials

- Purely for Tier 4 purposes, attendance for levels 1 and 2 should now be taken as follows:
 - Level 1: CS1CT and CS1P (semester 1) and CSIS or CS1P/CS1PX (semester 2)
 - Level 2: JP2 (semester 1) and ADS2 (semester 2).
 - Tier 4 visa students must have 70% of attendances monitored.
- Students should **not** submit a good cause claim for a missed lab but notify the lecturer.

1.2 Quizzes and other continuous assessment

- The School policy is that students should be required to complete no more than 70% of quizzes or other types of continuous assessment.
- Students should not submit a Good Cause claim but notify the lecturer if they missed a quiz or other type of continuous assessment.

⁹ www.gla.ac.uk/services/moodle/

3.5.7 TIER 4 ATTENDANCE (THIS IS FOR NON-EU STUDENTS AT UG)

The University is required to monitor the attendance of its Tier 4 (non-EU) students to ensure compliance with the conditions of its Highly Trusted Sponsor (HTS) license to admit and teach international students. To ensure a consistent approach to providing evidence of student engagement in their studies, attendance will be captured for ALL students at a lab, tutorial or project supervision meetings (see Attendance Monitoring document on School noticeboards for further details)

If you are a student at the University on a Tier 4 visa, you should be aware that failure to attend and sufficiently evidence engagement with your courses will lead to follow-up e-mails, potential withdrawal from studies and your permission to remain in the UK will, as a consequence, be withdrawn by the Home Office. Administrative staff within the school will follow up by email, in the first instance, before any action of this nature is taken.

Purely for Tier 4 purposes, attendance for levels 1 and 2 should now be taken as follows:

- Level 1: CS1CT and CS1P (semester 1) and CSIS or CS1P/CS1PX (semester 2)
- Level 2: JP2 (semester 1) and ADS2 (semester 2).
- Tier 4 visa students must have 70% of attendances monitored.

Students should **not** submit a good cause claim for a missed lab but notify the lecturer.

3.6 SUCCEEDING IN YOUR STUDIES

We will do all we can to help you succeed in your chosen courses. However, in the end it's up to you. Make sure you know what you must do in order to gain the credits for a given course. It is important to keep track of your progress throughout the year. Keep your own record of your grades for assessed exercises.

It is important to develop the skill of managing your time effectively if you wish to realise your full potential during your period at University. This is particularly true in studying Computing Science, where the nature of the practical work is such that you may be tempted to spend much more time than is wise perfecting your solutions.

It is tempting to put in extra time on assessed exercises, perhaps a great deal of extra time, in an attempt to obtain maximum marks. Bear in mind that the time cost of doing so must be carefully balanced against the other things that you have to do. In particular, over-emphasis on assessed exercises may leave you short of time for reading and understanding lecture notes, working on un-assessed tutorial exercises (which may be examinable), etc. It is up to you to find the right balance.

3.7 SAFETY

Make sure you know the procedure in case of fire or other emergency for evacuation of the Boyd Orr building and any other building where you may attend classes. Computer equipment that is not functioning properly may be a safety hazard. If you discover any equipment that is out of order, or in any other apparently unsafe condition, report this immediately to your tutor or another member of staff.

If a UGS student discovers any equipment that is out of order, or in any other apparently unsafe condition, report this immediately to your tutor or member of staff located at UGS School of Computing Science Office, SIT Building@RP, #08-19 (Republic Poly Campus).

4 ASSESSMENT AND EXAMINATION (UG & UGS)

4.1 CREDITS

Each course, at each level, has its own requirements for completion. These requirements include submission of assessment components amounting to at least 75% of the overall weight of assessment, i.e. if you don't hand in at least something for each piece of assessed coursework you risk getting a fail for the course. Some courses have other specific requirements – see Moodle pages for details of particular courses at each level.

- If you complete a course, you will be awarded the appropriate number of credits and a band on the 22 band scale. All results are released as bands. The nominal scale for translating marks to bands is available on Moodle. The Honours mapping is used for levels 1 to 5
- If you are ill you **may** be awarded an MV (subject to the provision of appropriate evidence), and you can take the resit exam as a first attempt
- If you fail to complete a course, you will be classed as:
 - **CW** (Credit Withheld) if the situation can be redeemed in a resit exam, or
 - **CR** (Credit Refused) if the situation is irredeemable. This means you will get no credits for the course.

Formal decisions on course completion and grades awarded are made by the Board of Examiners at their end of year meeting in June (main diet). Grades are also awarded in both January (December exams –levels 1 and 2 only) and August (resit diet).

4.2 MULTIPLE-CHOICE EXAMS

- The School has a policy of negative marks for incorrect answers. For a question worth m marks with k possible answers, (i.e. a correct answer would result in m marks), the negative mark is $m/(k-1)$. For example, a for question worth 6 marks with 4 possible answers, a wrong answer results in -2 marks.
- The negative marks will be taken into account per question topic (typically an exam has 3 topics each marked out of 20), and the total for each question topic will be capped at 0 (i.e. it will never be negative).

4.3 ASSESSMENT OF COURSEWORK

You will be given a band for assessed exercises. Note that assessed coursework bands tend to be higher than examination marks. In line with the University's Data Protection Policy, coursework not collected by students will be destroyed at the end of June of each academic year.

You are expected to spend 100 hours of your own time for each 10 credit course working on assignments and exam preparation (200 hours for a 20 credit course and so on). You should be aware that much of computing, particularly programming, involves problem-solving rather than assimilating factual knowledge. Therefore you cannot learn computing only by reading lecture notes and books; you **must also** work on problems and make full use of provided labs where an experienced person is available to guide and assist you.

Please note:

Coursework can NOT be redone unless stated otherwise in the course catalogue

4.3.1. SUBMISSION OF COURSEWORK

The School operates a Policy of 4.30 pm deadline (local time) for the submission of all assessment.

Each assignment will have a hand-in deadline. Some courses require electronic submission and others submission on paper. Course coordinators will provide detailed instructions on the submission of work for their course. Please note students must sign an “own work” form via [SocsOnline](#) before submitting all written submissions. **The only exception is when coursework is submitted via Moodle. In this case students will “sign” the own work form when submitting on Moodle. Students must ensure they press the submit button otherwise work may not be marked.**

Assessed work that is submitted late is subject to a reduction in marks, per working day, unless appropriate dispensation has been obtained. The reduction will be equivalent to two bands per working day or part thereof. Coursework that is 5 or more days late will be awarded 0 (band H). Note that if coursework is returned to the class within 5 working days then late coursework will be awarded 0 (band H). Your final band for the assessed exercise may also be reduced by two bands if you do not follow the published submission instructions.

Your work will generally be returned to you within three teaching weeks (15 working days) of submission.

The Board of Examiners has the right to inspect your marked assignments. *Retain all of your returned assignments until the end of the year.*

4.4 ETHICS APPROVAL POLICY

The University requires students to obtain ethics approval prior to conducting projects or assessed exercises that involve people (‘participants’) other than the student or their supervisor. This applies for the collection of information from participants, for example in getting comments about a system or getting information about how a system could be used; if participants are used when conducting experiments to evaluate a working system; or for any other purpose where other people are involved.

Note that student projects are not covered by any prior ethical clearance that has been given for a similar project to another student or to supervisors. For student projects, ethical approval is given to the student, not to the project. The responsibility for obtaining ethical clearance, if necessary, falls jointly to both student and supervisor. The Moodle pages associated with the course in which you require ethical clearance will give guidance on obtaining ethical clearance.

4.5 BACKUPS

No dispensation will be made for loss of electronic files relating to coursework or project work due to failure to keep adequate backups. Students should ensure that they store all coursework and project work on their UNIX or Windows filestore, which is backed up nightly.

4.6 END-OF-COURSE EXAMINATIONS

The format of each exam paper will depend on the course. The exact rubrics of all papers will be posted on the relevant Moodle page during the session.

Most courses have an examination as a major component of their assessment. Examinations are generally in April/May, but some Level 1 & 2 exams are held in December. All resit exams take place in July/August. Level 1 and 2 students can resit if they have achieved less than a D3 to allow them to meet university requirements of no more than 40 credits below a D3. Level 3 designated students can resit any of their exams in order to be able to improve their result enough to be eligible for a designated degree. Honours students (levels 3 and 4

both UG & UGS *and* level 5) are **not** allowed to resit exams unless they have been ill or have other special circumstances during the April/May exam diet.

Copies of previous years' examination papers are available by accessing the University Library web pages. The school does not make marking schemes or past resit papers available.

UG Exchange students in particular, should note that credit cannot be awarded for a course unless the examination is taken. Exchange students must take any exams here in Glasgow during April/May diet. Arrangements to take exams in their Home country can only be made by Registry for the August resit diet.

4.7 USE OF DICTIONARIES AND CALCULATORS

Overseas students for whom English is not their first language are permitted to use dictionaries in examinations. Only paper dictionaries may be used; **no electronic devices of any form are permitted**. English dictionaries are not permitted. All dictionaries are subject to inspection by an invigilator. Electronic calculators are typically not permitted in any Computing Science examinations. However, if a calculator is permitted in an examination, you will be advised by the course coordinator and it will also be noted on the front of the exam paper. Please note that **SMART watches are not allowed in the exam hall** so must be removed before entering the room.

4.8 VIEWING OF EXAM SCRIPTS (UG)

Students will have the opportunity to view their exam scripts up to two weeks after the exam marks have been published. Any requests must be made to the relevant class secretary stating your name ID number and the scripts you wish to view. **Please note we cannot post copies of exam scripts or provide them electronically.** You will be contacted with a date and time to come and view your script(s) under the supervision of a member of staff. The School will endeavour to make exam scripts available within one week of the request.

Exam scripts are provided so that students can see where they made mistakes, to learn from them. If a student notices that marks have been added up incorrectly, or that marks have been transferred incorrectly to the front of the script, or that some portion of the script has not been marked, they can bring this to the attention of the administrator who is monitoring the viewing. Students cannot question academic judgement and staff are not required to justify the marks they have awarded. Students are not allowed to write on the exam script, take notes or take photographs of the exam script.

After the 2 week period all exam scripts will be stored away securely to meet legal data protection requirements. Therefore any ad hoc requests made out with the 2 week period may be subject to delay. Students are therefore strongly advised to request to view their script(s) at the first available opportunity.

4.9 FEEDBACK, AND EXAM FEEDBACK POLICY

Feedback is a key part of the learning process, and ***appears in many forms***. The most familiar form of feedback to students, usually, is the written comments returned with marked coursework. However, feedback occurs whenever you engage in any kind of dialogue, so be sure to recognise the following forms too:

- Some lecturers give a whole-class feedback session after submission of an assessed exercise. While this may not seem personalised to you, you will find it contains a wide range of misconceptions as experienced right across the class – being aware of them all will give you a better picture of the subject area and pitfalls to you fully understanding it.

- Any class discussion that comes up is a source of feedback on the class's understanding. If there's anything you don't understand, **speak out** – answers to your questions are direct feedback. Do your best to understand other students' questions – the ensuing discussion will most likely deepen your understanding. Always, **trust yourself** to speak up – you will be speaking for the silent majority most of the time.
- Any short test in class gives you direct feedback. Assuming it is self-marked in class, or even if it is handed in and returned, marked, a few days later, being able yourself to see which questions you got right and which wrong is immediate feedback for you to act on. A raw mark is one thing, but targeting the exact areas that you don't understand will be much more beneficial.
- On the basis of discussion with students or staff, thinking or reading outside the class, the lecturer may initiate in-class discussion or an email thread about topics already covered. You have an opportunity to engage in the discussion he or she has started, and gain further feedback on your own thinking.

There is a policy on providing feedback on exams. Please see **Appendix G** for the details.

5 APPEALS (UG & UGS)

It is hoped that consultation with tutors, lecturers and/or the year head will resolve any difficulties or disputes that may arise. However, all students have the right of appeal against any School decision (with the exception of academic decisions), in writing, to the Head of School.

A student may further appeal against a School decision to the College of Science and Engineering and then to the Senate. Details of the College and Senate appeals procedures are in the University Calendar which can be accessed from the Senate web pages.

5.1 COMPLAINTS (UG)

If you have a complaint please raise it with a member of staff in the area concerned. We aim to provide a response to the complaint within five working days. This is Stage 1.

- If your query relates to administration, contact the teaching administrator
- If your query relates to a specific course contact the course lecturer
- If your query relates to your project, contact your project supervisor

If you are not satisfied with the response provided at Stage 1 you may take the complaint to Stage 2 of the procedure. Similarly, if your complaint is complex, you may choose to go straight to Stage 2. At this stage the University will undertake a detailed investigation of the complaint, aiming to provide a final response within 20 working days. You can raise a Stage 2 complaint in the following ways:

- by e-mail: complaints@glasgow.ac.uk; by phone: 0141 330 2506
- by post: The Senate Office, The University of Glasgow, Glasgow, G12 8QQ
- in person: The Senate Office, Gilbert Scott Building, The University of Glasgow.

Complaints do not have to be made in writing but you are encouraged to submit the completed Complaint Form whether it is at Stage 1 or Stage 2. This will help to clarify the nature of the complaint and the remedy that you are seeking.

Remember that the SRC Advice Centre is available to provide advice and assistance if you are considering making a complaint. (Tel: 0141 339 8541; e-mail: advice@src.gla.ac.uk)

5 PLAGIARISM POLICY (UG & UGS)

Every award of the University of Glasgow is based on assessment of the student's learning, using evidence in the form of submitted work. Such evidence is valid only insofar as it represents the student's own work. If the student submits another person's work and represents it as his/her own work, the evidence is fraudulent. This is plagiarism, which undermines the University's academic standards and is therefore a serious disciplinary offence.

The University of Glasgow states:

“Plagiarism is defined as the submission or presentation of work, in any form, which is not one's own, without acknowledgement of the sources. Special cases of plagiarism can also arise from one student copying another student's work or from inappropriate collaboration.”

In Computing Science, there is potential for plagiarism in software development, essays, and project reports/dissertations, as explained in the attached guidelines. The guidelines also explain the circumstances in which it is legitimate to use another person's work and how that work should be acknowledged.

Plagiarism can be detected by a variety of means, including sophisticated software that is routinely used in the School.

It is the University's and School's policy to deal severely with all cases of plagiarism. The Head of School has the power to award a mark of zero for work shown to have been plagiarised, and to amend the student's record to reflect that decision. Serious and repeated offences are referred to the Senate Assessors for Discipline and the Senate Disciplinary Committee, who have the power to impose more severe penalties including suspension from the University.

At the start of each academic year, all students in Computing Science classes are required to familiarise themselves with the School's plagiarism policy and guidelines.

Along with each piece of submitted work, students are required sign an online own-work declaration confirming that he/she has complied with our plagiarism policy in that piece of work on [SocsOnline](#).

Coursework marks may be withheld if the declaration has not been signed, and a penalty may be applied.

Declaration

**I hereby declare that I have read and understood the above plagiarism policy and the attached guidelines.
I undertake to comply with this policy in all my submitted work, and to consult a lecturer or year head
whenever I am uncertain about how the policy and guidelines are to be interpreted.**

Detailed guidelines on Plagiarism, together with some example scenarios, appear in Appendix A of this document.

5.3 BLOGS AND SOCIAL NETWORKING

Many students make use of blogs and/or social networking sites (e.g. Facebook, Twitter) to communicate with friends and family members. When you write comments on these online blogs bear in mind that they are

open to the world at large, and that negative comments made about named people or institutions could lead to disciplinary, and possibly legal, action being taken against you. **Please be careful about what you write.**

5.4 CONTRACT CHEATING

Please note that the use of a service such as, for example, Freelancer, VWorker, Getacoder or EssayBay to do your coursework for you is a disciplinary offence. It could even lead to expulsion. These websites are monitored and if any of our assignments are found we will investigate further. It is best to do your own coursework so that you can gain the full benefit from your learning experience here at Glasgow.

6 LABORATORIES AND EQUIPMENT

6.3 LABORATORIES

During scheduled laboratory hours, members of the appropriate lab group have priority, but others may use the machines subject to availability and the approval of the supervising lecturer or tutor.

6.3.1 LABORATORIES - UG

The Boyd Orr building is open from 08:00 until 22:30 Monday-Thursday, and until 21:30 on Friday, during semester. It is open 09:00-17:00 during vacations, but is closed on all public holidays. **The labs are not open at weekends to Level 1 and 2 students.** Details of opening and closing times are displayed in the building itself. The Boyd Orr building and the Computing Science buildings are kept locked outside normal working hours.

The school has a number of teaching labs in the Boyd-Orr building.

Level 1: BO715 – 64 windows machines

Level 2: BO706 – 56 windows machines

Levels 3, 4 and 5: BO620 – 48 dual boot windows/linux – open access

BO720 – 72 dual boot windows/linux – **used for lab based teaching**, open access at other times

Students at level 3 and above can get their student card activated to give them out of hours access to the Boyd-Orr building and the school's teaching labs. Students should first contact Tom Young, Building Superintendent, room 224 in the Boyd Orr Building, in the first instance. If he is not there students can also ask the janitors in the Boyd Orr building who will be able to do this for them. Please note that 24 hour access is a privilege and may be withdrawn if students misbehave.

Hardware faults should be noted in the hardware fault book in the lab. System software faults including networking or server issues should be emailed to support@dcs.gla.ac.uk with a copy to the relevant member of academic staff if the fault is affecting coursework. If faults that disrupt teaching persist for several working days, the year head should be informed.

You can access the campus wireless network from most of our labs in the Boyd-Orr. Information on this is available at www.gla.ac.uk/services/it/forstudents/. Finally if you encountered any computer system faults, please email support@dcs.gla.ac.uk. The University provides wireless access points at various

places on campus to allow students access to the University network. Information regarding wireless access can be found on the IT Services web site¹⁰

6.3.2 LABORATORIES - UGS

The computer lab is located at the SIT Building@RP called SR8A, Level 8, on the Republic Polytechnic campus and is open to students from 9 am to 11 pm (Monday to Friday).

System software faults including networking or server issues should be emailed to IThelpdesk@SingaporeTech.edu.sg with a copy to the relevant member of academic staff if the fault is affecting coursework. If faults that disrupt teaching persist for several working days, University of Glasgow/Singapore staff should be informed.

The SIT Building on Republic Polytechnic is a wireless Building and campus. There are wireless access points at various places on campus to allow students access to the University network. Information regarding wireless access can be found at www.dcs.gla.ac.uk/UGS.

6.4 PULL PRINTING (UG)

The School uses the universities central Pull Printing system.¹¹ There is one printer located in BO620 and two located in the corridor of BO Level 7. The printers also have functions for scanning and copying.

6.5 CONDITIONS OF USE

Appendix B of this document contains the detailed conditions of use of equipment in the Computing Science laboratories. All students are required to familiarise themselves with this document. It is also posted on the noticeboards in the labs in the Boyd Orr building and on the general Computing Science Moodle page.

7 MISCELLANEOUS (UG & UGS)

7.1 CLASS PRIZES

One or more class prizes will normally be awarded at the end of each academic year, as decided by the Board of Examiners. Other prizes may be awarded, depending on sponsors.

7.2 PHONETIC PRONUNCIATION OF NAMES (GRADUATION)

If you think that your name may be mispronounced at the graduation ceremony, you can add a phonetic pronunciation of your name in the graduation section of MyCampus.

7.3 UNIVERSITY LIBRARY

Texts for **UG undergraduates** are held primarily in the Undergraduate Lending Library (ULL) and the Short Loan Collection (SLC) located on Level 2 of the Library. All the texts on your reading lists are available as multiple copies. Other texts that may be relevant to your courses can be found in the level 5 annex of the Library building.

¹⁰ www.gla.ac.uk/services/it/mobile/

¹¹ www.gla.ac.uk/services/it/studentclusters/printing/printingscanningandcopying/

For more information please go to www.glasgow.ac.uk/registry/finance/funds

Texts for **UGS undergraduates** are held primarily in the Republic Polytechnic Library. All the texts on your reading lists are available as reference or on loan. Other reference of reading can be found on Republic Polytechnic Library Online Resources or you can refer to University of Glasgow's Online Resources.

7.4 PHOTOCOPYING

UG Students: There is no facility to make photocopies in the School. There are photocopying facilities in the Queen Margaret Union. **UGS students:** Ensure that you adhere to the copyright regulations at Republic Library. There are two printing shops in the library. Please check with the shops on their rates for photocopying.

6 UG STUDENTS ONLY

6.1 STUDENT LEARNING SERVICE (SLS)

The [Student Learning Service](#)¹² (SLS) offers study skills advice, guidance and support to all students. If you would like to make your learning techniques more effective, you can attend workshops which take place regularly in the McMillan Reading Room or contact the Effective Learning Adviser (ELA) for the College of Science and Engineering. Popular topics for discussion include improving essay writing, revision techniques, exam techniques and note-making. ***You are a professional learner – why not take every opportunity to learn how to do it better?***

6.2 STUDYING ABROAD

As a student of the University of Glasgow, you have the opportunity to enrich your academic experience, and explore different cultures and lifestyles by electing to spend a year at a university overseas at one of our exchange partner-institutions in Europe (Erasmus) and beyond (International Exchange Programme).

First year students in any of the BSc/MSci degrees offered by the School of Computing Science (that is, Computing Science, Software Engineering, Informatics, Electrical and Software Engineering, or a combined degree with Computing Science) may apply for a study abroad programme in their second year.

Second year students who are enrolled in the BSc/MSci (Informatics) degree (or are willing to change to the BSc(Informatics) degree), or are doing a Combined Honours degree can apply to study abroad in third year.

Accreditation requirements prevent Computing Science, Software Engineering, Electrical and Software Engineering and Mobile Software Engineering students from studying abroad in third year.

Note that because of the year-long compulsory courses in all the degree programmes offered in the School of Computing Science, it is not possible to undertake a one-semester exchange: if you go on exchange, then you must go for the full year.

The exchange at the university overseas will be recognised as part of your Glasgow degree and must therefore be planned carefully to fit in with your programme of study. As you will continue to be a University of Glasgow student no additional tuition fees are payable to the university overseas.

If an exchange appeals to you, start planning early! Details on how to apply, including deadlines, can be found on the Computing Science Moodle CS Study Abroad /Erasmus Moodle Page (moodle2.gla.ac.uk/course/view.php?id=3322).

¹² www.gla.ac.uk/services/sls/

6.3 EMPLOYABILITY COURSES

The College of Science & Engineering in the University of Glasgow has produced short optional 'Employability' courses for level 1 and level 2 science undergraduates that will help you to start thinking about and planning for work, including part-time and summer jobs, work placements, internships and eventually your career, ***all of which are great for your CV!*** The courses have no lectures or laboratories, just 4 or 5 one-hour informal workshops in which groups of students will work with staff and student mentors on a series of activities and discussions. Students who wish to take advantage of these courses are required to register individually for each of the sessions on My Campus and early registration is advised to guarantee a place on the courses in semester 1.

Students who fulfil the requirements of the level 1 or level 2 Employability courses (by attending at least 4 out of 5 sessions in level 1, or 3 out of 4 sessions in level 2), will have successful completion of the course recorded permanently in their university record.

7.5 ACCREDITATION

Honours graduates, except Informatics, are recognised by the British Computer Society (BCS), The Chartered Institute for IT, for the purposes of fully meeting the academic requirement for registration as a Chartered IT Professional and partially meeting the academic requirement for registration as a Chartered Scientist. Honours graduates are recognised by the BCS and the Institution of Engineering & Technology (IET) for partially meeting the requirement for a Chartered Engineer. The Computing Science and Software Engineering programmes have also been awarded the Euro-Info Bachelor label.

All MSci graduates, except Informatics, are recognised by the British Computer Society (BCS), The Chartered Institute for IT, for the purposes of fully meeting the academic requirement for registration as a Chartered IT Professional and partially meeting the academic requirement for registration as a Chartered Scientist. The Computing Science and Software Engineering programmes have also been awarded the Euro-Info Master Label.

8 UGS STUDENTS ONLY

8.3 OVERSEAS IMMERSION PROGRAMME AT GLASGOW (OIP)

As an integral part of the Degree Programme, it is compulsory to attend a four-week intensive summer programme in Glasgow. The OIP runs during the summer vacation (June-July and is a Year 1 Level 3) course. Accommodation will be reserved in student flats close to the University of Glasgow main campus. This 10-credit course will count towards the final award. Students will have to pay for their flights, accommodation, food and subsistence. You will be advised closer to the travel time of the details. We would highlight this is a compulsory learning experience and request that all students adhere to the advice by University of Glasgow and Singapore Institute of Technology and avoid making your own arrangements for accommodation.

8.4 VALUE-ADDED PROGRAMMES

In collaboration with Singapore Institute of Technology (SIT), it is compulsory for all UGS students to attend and complete these programmes in order to be awarded their degree.

8.5 PROBLEMS AND SPECIAL CIRCUMSTANCES (UG & UGS)

Keep us informed: if for any reason you find yourself missing work or falling behind, consult with your adviser of studies, project supervisor, or the Year Head to form a plan for catching up. Make sure you inform us while there is still time to deal with the problem effectively.

8.6 ILLNESS AND OTHER PERSONAL CIRCUMSTANCES

It is important that you maintain awareness of how you are coping with your courses throughout the year, and that you take appropriate action if things are not going well. If you fall behind or are worried about your progress, seek help immediately! If for any reason you find yourself missing classes, failing to complete assessments, or generally falling behind, consult with your adviser of studies and/or year head to form a plan for catching up. Make sure you inform us while there is still time to deal with the problem effectively.

A period of ill health or other adverse personal circumstances could be a major threat to your degree. The School is anxious to offer as much support as it can to those who experience such problems, but we can only do so if we are aware of the problems at an early stage. ***Please contact your adviser of studies and the Year Head for your year as soon as you feel that your work is being affected by health or other personal difficulties.***

The University has compiled a Student Absence Policy which indicates the procedures to be followed for

- the notification of **absence** from your studies and/or
- a notification of **good cause**.

If a student is **absent** from the university they are required to provide an absence notification. We require this so that we are informed of the issue and can offer assistance if appropriate. Use the MyCampus absence reporting facility to notify us of absences.

If the absence is more than 7 days, **or** causes them to miss coursework deadlines, miss a compulsory class or miss exams **or** feels their performance in coursework or exams have been affected by illness or personal circumstances a student is also required to provide a notification of **good cause** – i.e. student performance that has been negatively affected despite the best efforts of the student. Students are required to provide the notification of good cause within 7 days of the absence, coursework deadline or examination date.

The Board of Examiners will not necessarily take account of notifications of good cause reported after this deadline when considering a case for good cause.

8.7 UNFORESEEN CIRCUMSTANCES/ILLNESS AFFECTING ASSESSED COURSEWORK

If you are unable to submit an **assessed exercise**, or the quality of your submitted work has been affected, due to ill health or other personal circumstances, you should obtain appropriate documentary evidence as described in the [University Student Absence Policy](#)¹³. You should then complete a notification of good cause on MyCampus and submit your evidence, explaining what the problem is. You may do this prior to the deadline, if appropriate, or no later than seven days after the published deadline.

The course coordinator will contact you to agree on an appropriate plan of action for the item of coursework. This could involve either granting an extension to the deadline, or “voiding” the item of coursework so that the remaining assessment on the course is scaled up to 100%.

For more detailed information please check the MOODLE page at moodle2.gla.ac.uk/course/view.php?id=3043

8.8 ILLNESS AFFECTING EXAMINATIONS

As mentioned above, the University's Student Absence Policy describes the procedures that must be followed in the case that an illness, or other personal circumstances, causes you to miss an exam. Similarly, if you believe that illness, or other personal circumstances, occurring prior to, or during, an exam has affected your performance at that exam; you should follow the same reporting procedures as described for missing an exam.

In particular, as mentioned above, the completed notification of good cause report on MyCampus must be received no later than 7 days after the date of the exam. The Board of Examiners will not necessarily take account of notifications of good cause reported after this deadline. Exceptions to this include the case where the illness itself prevents the student from submitting the notification any sooner.

The University regulations specify in detail what happens when a student misses part or all of the final examination due to illness. If at least 75% of the Honours assessment (i.e., over Levels 3 and 4) has been completed, the student may be awarded a classified Honours degree based on the completed exam papers and assessed coursework. (For these purposes, projects count as papers.) If less than 75% of the Honours assessment has been completed, the student may be offered an unclassified Honours degree or a Designated degree (depending on the standard attained); but in that case the student has the right to repeat the entire final examination at the next exam diet.

¹³ www.gla.ac.uk/services/senateoffice/policies/studentsupport/absencepolicy/

8.9 FOR ALL STUDENTS

If you miss an exam due to illness or adverse personal circumstances, you should submit any evidence via MyCampus in a notification of good cause as prescribed by the University's code of assessment. If you provide such recognised evidence, it is likely you will be given an MV for the exam and be able to take the resit exam as your first attempt.

If you miss an exam for any other reason, for example if you have overslept, you write the wrong date or time in your diary, you forget, or your alarm fails, you will get CW (credit withheld) for the exam.

- If you are a first or second year student, or a level 3 designated student, you may take the resit but the final result will be capped at a D3.**
- If you are a level 3 or 4 Honours student you will not be able to improve your mark and will get a CR for the course. This may prevent you from graduating.**

8.10 SEEKING ADVICE

You should make every effort to keep up to date with your understanding of the lectures and the practical work, since once you get behind it is difficult to catch up again. In some courses, there is a gradual build up to a major exercise whilst in others the practical work is spread throughout the course. Inevitably the pressure builds up towards the end of each semester so you are strongly advised to plan accordingly. If you do fall behind you should seek help immediately from your Adviser of Studies, your lecturers, or the Programme Director. The best time to contact lecturers is at the end of a lecture, when an appointment can be arranged if necessary. We recommend that if you are having difficulties that you make contact with someone sooner rather than later. In our experience, this often leads to a more **successful outcome. If you have medical or personal problems, you can also get confidential help from the following services: ??????**

8.11 SOURCES OF HELP

Information and professional advice is also available via the Students' Representative Council (SRC). The SRC employs professional advisers to help you through any problems you might be having. These can range from welfare issues such as money and accommodation to representation in academic appeals and disciplinary matters. This is a free service, no appointment is necessary and their doors are open from 10-4 (Mon-Thurs) and 10-3 (Fri). It can be found at the SRC Student Welfare and Advice Centre. You can contact this service via advice@src.gla.ac.uk. This and any other information about the SRC is available from www.glasgowstudent.net/ and www.gla.ac.uk/services/studentsrepresentativecouncil/.

8.12 QUALITY ASSURANCE AND ENHANCEMENT

The Senate Office webpage provides information about various aspects of quality assurance and enhancement. This information can be found at the following link: www.gla.ac.uk/services/senateoffice/gea

PART II: LEVEL-SPECIFIC INFORMATION

Detailed descriptions of all Computing Science courses at all levels, and Staff Member Teams can be found at the relevant Moodle pages:

Level1	Level2	Level3	Level4	Level5
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1 PROGRESSION PATHWAY

The following description uses internal School mnemonics to describe individual courses rather than the official Registry and College codes.

The School of Computing Science has a set of rules for student progression from level to level. Year heads will apply the rules flexibly, taking account of any exceptional circumstances affecting a student's performance.

There are no guaranteed repeat years, although students may be permitted to repeat Computing Science courses at the discretion of the Head of School. If a student is granted permission to retake the year, they must take a full Computing Science curriculum. It is not possible to retake only part of the year.

Although Level 1 mathematics is no longer a prerequisite for entry to single Honours Computing Science (CS), Software Engineering (SE) it is still strongly recommended, as it will be helpful for many CS courses, and will be a prerequisite for some level 4 courses. We advise that all students intending to take single Honours CS, SE or MobSE should take level 1 mathematics unless they have a very good reason not to.

2 LEVEL 1 (UG)

Two sets of courses are currently offered by the School of Computing Science at Level 1. Either set enables students to continue to honours level in CS.

For students **with prior programming** experience, by which we mean that the student can solve unseen programming problems with little or no assistance, should take:

- CS1P: An introduction to programming (over two semesters, 20 credits)
- CS1F: An introduction to databases, human computer interaction, (over one semester, 10 credits)
- CS1S computer systems (over one semester, 10 credits)

For students with **little or no prior programming experience**, we have three courses:

- CS1CT – An introduction to Computational Thinking and Programming (semester 1, 20 credits)
- CS1PX: Further Programming (semester 2, 10 credits. Joining up with the CS1P class above)
- CS1S: An introduction to Computer Systems (semester 2, 10 credits. On this route CS1F must be taken in Semester 1 Level 2.

- CS1F: An introduction to databases and human computer interaction in semester one 10 credits)*

**Students may take the additional 10 credits in first year instead in their 2nd year.*

Students who have taken school-level programming courses, but do not feel confident in their programming skills (often the case, even with e.g. Scottish Highers), should take the second set of courses. How to judge "feeling confident"? If you solve *simple* problems by creating working programs in any language, then CS1P will be ok for you. If you have programmed before, but know that you struggle to get even quite simple programs working, then go for CS1CT.

In the early weeks of Semester 1 if you find CS1P too challenging, you can switch to CS1CT in order to gain the additional time to develop your programming skills. To ensure adequate time to catch up, this should be done no later than week 3 of teaching. It is also possible to switch to CS1P if you find CS1CT not too challenging. Again, this should be done no later than week 3 of teaching.

It is strongly recommended that 40 credits of Level 1 Mathematics are taken in year 1 or 2.

2.1 TUTORIALS AND LABORATORIES

In addition to lectures, each course has weekly tutorial/lab teaching sessions. The comprehensive tutorial and laboratory system is designed to help you during the year, and you should try to use it well. You are expected to spend a considerable amount of your own time studying and working on exercises as well.

You are expected to attend all of your scheduled laboratory sessions. If you can't attend your normal lab time, you should contact the level 1 class secretary to arrange a suitable alternative time for you to attend another lab. Due to the high volume of students it is not possible for you to attend other lab groups without express permission from the teaching office. If you are unable to attend a scheduled lab due to illness or other mitigating circumstances, you should follow the instructions outlined in the [University's absence policy](#), ensuring you submitting a notification of good cause where applicable. Laboratory attendance will be carefully monitored in accordance with the University's policy.

- In each course you will be assigned to a tutorial/lab group containing up to 16 students and supervised by one or more tutors.
- For CS1P, the teaching session consists of 2 one hour lectures and 1 two hour lab session and for CS1F, the teaching session consists of 2 one hour lectures and alternately one hour tutorial and two hour labs.
- For CS1CT, the teaching session consists of 2 two hour lectures and 1 two hour lab, for CS1PX and CS1S, the teaching session consists of 2 one hour lecture and 1 two hour lab each week;
- You will be in two groups, one for your programming class and one for your other class.
- Assignments to tutorial/lab groups will be done via My Campus upon enrolment for the course. You might be moved lab groups in January in order to accommodate timetable clashes with other students or if the lab group is no longer running. We will always endeavour to give students their first choice of lab group, but this is not always possible.
- Each group will be allocated to a particular cluster of workstations. It is essential that you use a machine in the correct cluster during your scheduled lab session. Outside your scheduled session, you may use any Level 1 workstation not in use by a scheduled group. The lab schedule can be found on the noticeboard in the level 1 lab (BO715) and also on the level 1 general Moodle page.

- You are expected to attend the tutorials and laboratories for your group and to attempt and submit exercises according to the issued schedule.
- All students will be expected to attend a lab familiarisation session in week 1 of semester 1: details will be given at the welcome meeting in week 0, and in lectures. This session will last approximately 1hr.
- Laboratory sessions will focus on practical exercises. Each submittable exercise has a deadline. *These deadlines are non-negotiable; under no circumstances will work be accepted after the deadline and no extensions will be given.* If you miss coursework due to illness or other personal circumstances, you must submit a notification of good cause, along with any supporting evidence. You may then be awarded an MV.
- Your tutor will provide feedback on and, where appropriate, a mark for, submitted exercises, and will return them to you promptly. Feedback can typically be found on Moodle in the area where you submit your work. Feedback for the lab exams can be collected from the teaching office. You will be advised of a suitable time to collect it.

Laboratory sessions take place in the level 1 lab (BO715). For CS1F and CS1S, a tutorial room for use during laboratory sessions will also be allocated, and each two-hour lab session will normally begin in that tutorial room rather than in the lab itself, the lecturer and tutors will provide further instructions accordingly.

*The tutors undertake to help you as much as they can; the obligation on your side is **to come to labs and tutorials prepared**. Roughly speaking, during term time, you should expect to spend one hour outside class for each hour you spend in a lecture, tutorial, or lab. Additional work that you do during vacations and in the period leading up to examinations should bring the total study time per 20-credit course to about 200 hours (including class contact time).*

2.2 EXAMINATIONS AND CLASS TESTS

CS1P will have class tests in October and December, with a degree exam in April/May. Lab exams for CS1P are held in December and March. CS1F will have a degree exam in December. CS1CT has a class test in October as well as in-class quizzes for credit, a lab exam in December and a degree exam in December. CS1PX has a lab exam in March and a degree exam in May. CS1S has a degree exam in May. Resit examinations for all courses take place in July/August.

2.3 EARLY EXIT

In CS1P it is possible to take an early exit route at the end of Semester 1 in order to obtain 10 credits for this course. If you wish to take the early exit, you must inform the class secretary **in writing** before the start of the Christmas vacation. For early exit students, the class test(s) become the examination(s).

For CS1P with early exit, the assessment weightings are 70% for the exam, 10% for the first class test, and 20% for the lab exam.

8.13 STUDENTS INTENDING TO PROGRESS TO LEVEL 2 COMPUTING SCIENCE

These students must take both CS1P, CS1F & CS1S (students with prior programming experience), **or** CS1CT, CS1PX, and CS1S (students with no prior programming experience), **or** CS1CT, CS1PX, and CS1F. The prerequisites for level 1 are a grade B or above in Higher Mathematics, or passes at grade C in Higher Mathematics and grade B in Higher Computing or Information Systems (or an acceptable equivalent). Further information relating to entry requirements can be found in the undergraduate prospectus.

2.4 LEVEL 1 COURSE SELECTION (ALL ROUTES) AVAILABLE TO ALL STUDENTS

The following level 1 routes are available for all Computing Science degrees.

Route 1 (for students with prior programming experience): CS1P, CS1F and CS1S

Route 2 (for students with no prior programming experience): CS1CT, CS1PX and CS1S

For route 2 students if you want to take an additional 10 credits in level 1, then choose CS1F. All ESE students **must** take CS1F and CS1S in level 1.

8.14 STUDENTS INTENDING TO PROGRESS TO LEVEL 2 COMPUTING SCIENCE

These students must take both CS1P and CS1F (students with prior programming experience), **or** CS1CT, CS1PX, and CS1S (students with no prior programming experience), **or** CS1CT, CS1PX, CS1F and CS1S. The prerequisites for level 1 are a grade B or above in Higher Mathematics, or passes at grade C in Higher Mathematics and grade B in Higher Computing or Information Systems (or an acceptable equivalent). Further information relating to entry requirements can be found in the undergraduate prospectus.

9 LEVEL 2 (UG)

Current information on the organisation and delivery of the Level 2 courses is available via the Level 2 pages on Moodle. Consult your adviser for advice about which level 2 courses you need to take for your intended degree. You should also consult Part III of this document.

2.5 LECTURES

Each course is taught for 11 weeks. There are also laboratory sessions, tutorials and examples classes (semester 2, ADS2 and WAD2) as appropriate.

*You are expected to attend **all** lectures.*

- JP2: Java Programming 2
- AF2: Algorithmic Foundations 2
- NOSE2: Networks & Operating Systems Essentials 2
- OOSE2: Object Oriented Software Engineering 2
- ADS2: Algorithms and Data Structures 2
- WAD2: Web Application Development 2
- CS1F: *(For students who took CS1CT/CS1PX/CS1S in 1st year **and** Faster Route students)*
- CS1S *(For Faster Route Students)*

2.6 LABORATORIES

AF2 will have weekly tutorials in semester 1.

NOSE2 & CS1F will have tutorials every fortnight and labs every other fortnight in semester 1.

JP2 will have a weekly lab in semester 1

OOSE2 fortnightly labs in semester 2

ADS2 will have fortnightly lab groups in semester 2.
WAD2 will have fortnightly lab groups in semester 2

Laboratory and tutorial sessions focus on practical assignments. Your tutor will assume that you have done any preparatory work required, *and will not make special provision for you if you **have not**.*

As well as working on problems, you should use the labs and tutorials to ask questions about any matters that you do not fully understand.

2.6.1 LAB GROUPS

For laboratories the class will be divided into groups of about 15 students; groups will be assigned at the start of the year. You might be moved lab groups in January in order to accommodate timetable clashes with other students or if the lab group is no longer running. We will always endeavour to give students their first choice of lab group, but this is not always possible.

You are expected to attend all of your scheduled laboratory sessions. If you can't attend your normal lab time, you should contact the level 2 class secretary to arrange a suitable alternative time for you to attend another lab. Due to the high volume of students it is not possible for you to attend other lab groups without express permission from the teaching office. If you are unable to attend a scheduled lab due to illness or other mitigating circumstances, you should follow the instructions outlined in the [University's absence policy](#), ensuring you submitting a notification of good cause where applicable. Laboratory attendance will be carefully monitored in accordance with the University's policy.

2.6.2 SCHEDULE

Most lab sessions will be held in the Level 2 Laboratory, the level 1 lab may also be used when additional space is required.

The schedule of lab sessions will be posted on the noticeboard in the level 2 lab and also on the level 2 general Moodle page.

It is your responsibility to ensure that you know the day, time, and location of your group's lab session(s).

2.6.3 EQUIPMENT AND SOFTWARE

The Level 1 and 2 Laboratories are equipped with PCs running Windows 10. All practical work will be done on these machines.

Level 2 Computing Science students have priority access to the machines in the level 2 laboratory. However, you are also allowed to use the machines in the Level 1 Laboratory, but Level 1 students have priority on these machines.

During scheduled lab sessions, members of the appropriate lab groups have priority, but other students in the class *may* use the machines subject to availability and the approval of the supervising tutor. You might be asked to leave the lab if there is teaching taking place.

2.7 ASSESSMENT AND EXAMINATION

Specific completion criteria for the various courses are as follows:

- **JP2:** Submission of at least 5 out of 8 laboratory exercises and attendance at degree exam;
- **OOSE2:** 3 out of 5 laboratory exercises and attendance at degree exam;
- **NOSE2 and ADS2:** submission of at least one of the two assignments, attendance at three or more lab sessions and attendance at degree exam;
- **AF2 and WAD2:** submission of at least one of the two assignments and attendance at degree exam;
- **CS1F:** submission of at least one of the assignments (either IM or HCI) and attendance at degree exam.
- **CS1S** speak to John O'Donnell

2.8 FASTER ROUTE COURSES

Each course is taught for 11 weeks. There are also laboratory sessions, examples classes and tutorials as appropriate. *You are expected to attend **all** lectures.*

- **JP2:** Java Programming 2
- **NOSE2:** Networks & Operating System Essentials 2
- **AF2:** Algorithmic Foundations 2
- **CS1F:** Computing Science
- **CS1S:** Computing Systems
- **OOSE2:** Object Oriented Programming 2
- **ADS2:** Algorithms and Data Structures 2
- **WAD2:** Web Application Development 2

In addition, there is a mandatory course called Succeeding in University Study in Computing Science, run by the Student Learning Service. You are expected to attend all meetings of this course. This induction is radically different from typical study skills programmes, in that the support you will receive interleaves directly with the schedule of work you will be undertaking in Computing Science. It focuses more strongly on the transferable skills you will need throughout your degree and also to prepare you for the workplace. Sessions are timetabled fortnightly, and attendance is mandatory for 9 out of 10 sessions.

Level 2 entry is:

- **guaranteed** to students who achieve a GPA of 15.0 (B3) or better in their Level 1 CS courses at first sitting.
- **not guaranteed** to students with a GPA of 12.0 (C3) or better in their Level 1 CS courses at first sitting, but **may be permitted** at the discretion of the School.

In either case, all grades for CS courses must be at **D3 or better** – students who have gained a sufficient GPA at first sitting but have individual CS course grades below D3 must resit to improve those grades.

The following lists the pathway to follow in Level 2:

- Single Hons CS, SE and SEWP students who took CS1P, CS1F, and CS1S (route 1) in level 1 should follow **pathway 1**;
- Single Hons CS, SE and SEWP students who took CS1CT, CS1PX, and CS1S (route 2) in Level 1 should follow **pathway 2**;
- Faster route students should follow **pathway 3**;
- Combined honours students should follow **pathway 4** (*Combined Hons CS + other subject*);
- ESE students should follow **pathway 5**.

Additional co-requisites may exist for specific courses. You should check with your adviser of studies for further assistance with course choices.

9.3 LEVEL 2 PROGRESSION PATHWAYS

Pathway 1: ADS2, AF2, NOSE2, JP2, OOSE2 and WAD2 (60 credits of computing science).

Pathway 2: ADS2, AF2, CS1F, NOSE2, JP2, OOSE2 and WAD2 (70 credits of computing science).

If the student took CS1F in Level 1, then only the 60 credits of Pathway 1 are required

Pathway 3: ADS2, AF2, CS1F, CS1S, NOSE2, JP2, OOSE2, and WAD2 (80 credits of computing science).

Pathway 4: JP2, OOSE2, ADS2, NOSE2 and at least one of AF2 and WAD2 (at least 50 credits of computing science).

If the student did not take CS1F in Level 1, then CS1F is also required in Level 2

Pathway 5: ADS2, NOSE2, JP2, OOSE2 and WAD2 (50 credits of computing science).

Progression from Level 2 to Designated Degree

The requirement for progression from level to Designated degree is now 9.0 (D3) after resit exams. The Undergraduate programme specifications should be updated to reflect this change.

2.9 RESIT EXAMINATIONS

Each course has a resit examination in July/August, which can only be taken in order to improve your overall grades and GPA. Resit grades are capped at D3 by the university. Recent changes to degree regulations mean that it is important to take resit exams, if necessary, in order to achieve at least a grade D3 in your courses. This applies even to courses in subjects that you do not intend to pursue after the current session. If you have more than 40 credits below grade D3 then this can prevent progression to Honours, even if you have high grades in your main subject. **You are strongly advised to attempt resit exams where appropriate.** Your adviser of studies can discuss this with you in more detail.

Additional co-requisites may exist for specific courses. You should check with your adviser of studies for further assistance with course choices.

10 LEVEL 3 (UG & UGS)

The degree programmes offered comprise a series of taught courses and, for most students, a team project. The courses and project run throughout the year. Not all courses are taken by all students. Section 3.2 (of Part III) lists the compulsory and optional courses for each of the degree programmes.

10.3 TUTORIALS AND LABS

Each course has tutorials or laboratory sessions, usually once a week, at which attendance is compulsory, unless advised otherwise by the lecturer. Teaching in the labs will usually take place in BO720.

UG students should notify the Level 3 Year Head and the Teaching Administrator immediately if you spot any timetable clash, but be aware that for combined degree students it may not be possible to resolve a clash and it may be necessary to choose different courses. Attendance at labs will be recorded electronically.

10.4 PROJECTS

All CS3, CS3+, CS3H, CS3H+ (UG & UGS), SE3H, SEWP3H and ESE3H students are required to undertake a team project in level 3. Students in the CS3+ and CS3H+ cohorts will undertake a 10 credit team project. The remaining cohorts will undertake a more substantial 30 credit team project.

At the beginning of Semester 1 the class will be divided into teams of 5-6 students. The team project (TP(H)) is run in conjunction with the Professional Software Development course (PSD(H)) and the problem domain (and real world customers) will be introduced early in Semester 1. Each project team will be responsible for negotiating a software project with one of the customers and working with them throughout the year. A final release of the project must be demonstrated to the customer in week 27 at the end of Semester 2.

All projects count towards the final degree classification. Each team will receive an overall band for their project based both on the final product, but also on the conduct of the team software process during the year. Each member of the team will receive a rating from their peers based on their perceived contribution to the project. This rating will be used to compute a positive or negative *delta* to be applied to the group band for each student. The TP(H) team will use both the peer assessment and their own judgement and experience in awarding a delta.

We anticipate that you will learn a great deal from your project and that you will enjoy working as part of a team. This requires a certain level of commitment from you. You are responsible for ensuring that you make a contribution to the project and you should be aware that failure to contribute could negatively affect your final grade and even, in the direst of cases, prevent you from graduating. If you have a genuine problem you should speak to the TP(H)/PSD(H) team, the year head or your adviser so that any issues can be resolved as soon as possible. All students are *required* to meet with TP(H) team during the two teaching semesters.

ALLOCATION OF LEVEL 4 PROJECTS

Allocation of Level 4 projects is now at the beginning of Semester 2, rather than the start of Session.

Please note that non-participation in a team project can lead to a student being awarded a mark of CR (Credit Refused).

10.5 SUMMER PLACEMENTS (SE3H AND ESE3H STUDENTS ONLY)

All SE3H and ESE3H students are required to undertake an approved work experience placement, of at least 10 weeks duration, in the summer vacation between levels 3 and 4. The School provides extensive support for every student looking for a placement but cannot guarantee a placement for any individual. A student may propose their own placement but the SE3H/ESE3H Class Head must approve this before it is accepted as qualifying for credit. The placement is assessed and the grade is incorporated into the overall assessment for SE4H and ESE4H.

10.6 YEAR PLACEMENTS (SEWP3M STUDENTS ONLY)

All SEWP3M students are required to undertake an approved work experience placement, of 12 month duration over level 4. Students are responsible for securing their placement with a suitable employer that has been approved by the SEWP3H Class Head. However, the School provides extensive support for every student. The placement is assessed throughout the year and the grade is incorporated into the overall assessment for SEWP4M.

10.7 FINAL DEGREE CLASSIFICATION

For all Honours courses the level 3 marks are carried forward to the final degree classification with performance in the different levels weighted as follows

CLASS	LEVEL 3	LEVEL 4	LEVEL 5
CSH (UG & UGS) / CSH+ / SE (Hons)	40%	60%	-
ESE (Hons)	35%	65%	-
CS / SE / CS+ (MSci)	24%	36%	40%
SEWP (MSci)	30%	20%	50%

Note that there is a resit diet of examinations for Level 3 courses held in August/September **only** for non-Honours students and those with approved absences from April/May exams. **For progression to Level 4 you must attain the required standard at your first sitting of the Level 3 exams.**

10.8 UG ENTRY TO LEVEL 3

Entry to Level 3 is ultimately at the discretion of the Head of School, but students in Computing Science will normally be admitted if they meet the requirements identified below.

In order to obtain entry to an Honours degree programme in Level 3, students must satisfy part 15 of the Generic Undergraduate Regulations and Part 3 of the Supplementary Regulations for their degree programme, as set out by the College of Science and Engineering¹⁴, and must also satisfy the additional requirements of the School of Computing Science. Note that, amongst other things, the generic and supplementary undergraduate regulations require that **Honours students in Science must achieve a grade point average of 12.0 over 60 credits of Level 2 courses in the subject of their Honours Programme at the first attempt.**

The additional requirements of the School of Computing Science are as follows, where *all Level 2 Computing Science courses* corresponds to ADS2, AF2, JP2, NOSE2, OOSE2 and WAD2. These requirements are expressed at two levels – what is required for guaranteed entry, and what is required to be considered at the discretion of the School.

- **CS3H, SE3H, SEWP3H: Guaranteed:** minimum GPA of 15.0 (B3) over all Level 2 Computing Science courses at first attempt. **At School discretion:** minimum GPA of 12.0 (C3) over all Level 2 Computing Science courses at first attempt. Entry to the SE3H and SEWP3H classes are competitive, and only a limited number of places are available for the best students.
- **CS3H+: Guaranteed:** minimum GPA of 15.0 (B3) over 40 credits of Level 2 Computing Science courses at first attempt. **At School discretion:** minimum GPA of 12.0 (C3) over 40 credits of Level 2 Computing Science courses at first attempt. **In addition,** the student must fulfil the requirements for the other subject.
- **ESE3H: Guaranteed:** minimum GPA of 15.0 (B3) over the five pre-requisite Level 2 Computing Science courses (ADS2, JP2, NOSE2, OOSE2 and WAD2) at first attempt. **At School discretion:** minimum GPA of 12.0 (C3) over the same five courses at first attempt. **In addition,** the student must meet the requirements of the School of Engineering.

Electronic and Software Engineering Students who achieve a minimum GPA of 15.0 (B3) over the pre-requisite level 2 Computing Science courses and achieve a B3 or better in Engineering Mathematics 2 may transfer to CS3H, SE3H or SEWP3H. Those with a GPA of 12.0 (C3) and C3 or better in Engineering Mathematics 2 may transfer to CS3H, SE3H or SEWP3H at the discretion of the School.

¹⁴ www.gla.ac.uk/services/senateoffice/policies/calendar/

Students who do not meet the requirements for entry to our Honours degree programmes may be eligible for entry to the Designated Degree in Computing Science (CS3). Such students must satisfy the progression requirements in Parts 10 and 11 of the Generic Undergraduate Regulations and the requirements of Part 3 of the Supplementary Regulations for the Degree of Bachelor of Science, as set out by the College of Science and Engineering, and must also meet the following additional requirement from the School of Computing Science:

- **CS3/CS3+:** To guarantee entry to the Designated Degree/Combined Designated Degree, students must achieve a minimum GPA of 9.0 (D3) over all Level 2 Computing Science courses.
- Electronic and Software Engineering Students who achieve a GPA of 9.0 (D3) over the five pre-requisite level 2 Computing Science courses and Engineering Mathematics 2, but who are not permitted to transfer at the School's discretion to CS3H, SE3H, or SEWP3H, may transfer to CS3.

2.10 LEVEL 3 CURRICULUM

The level 3 curriculum for each degree programme is given below:

CS3H (UG)

The CS3H level 3 curriculum in Glasgow has compulsory courses in the first semester and optional courses in the second semester. The Team Project (30 credits) and Professional Software Development (10 credits) are compulsory and run together over both semesters. The structure of the two semesters is given below.

Professional Software Development PSD(H)	Algorithmics I ALGI(H)	Systems Programming SP(H)	Interactive Systems IS(H)	Data Fundamentals DF(H)	Team Project TP(H)
Professional Software Development PSD(H)	<i>Optional Course</i>	<i>Optional Course</i>	<i>Optional Course</i>	<i>Optional Course</i>	Team Project TP(H)

Additional requirements:

- Professional Skills and Issues PSI(H) (semester 1 of level 4);
- at least one security course (semester 2 of level 3 or level 4): Cyber Security Fundamentals CSFu(H), Cyber Security Forensics CSFo(M), Enterprise Cyber Security ECS(M), Human-Centred Security HCS(M) or Safety Critical Systems SCS(H);
- Individual 40 credit project (level 4).

The remaining credits (30/40 in level 3 and 70/60 in level 4) are taken from available optional courses as long as you meet the pre-requisites and timetabling constraints.

It is possible to add a **strand** (or specialism) to the CSH (UG) degree in one of the following areas:

- Data Science;

- Human Computer Interaction;
- Security;
- Systems;
- Theoretical Computer Science.

If a strand is chosen, then the strand will appear on your transcript and only one strand can appear on your transcript. Each strand has requirements on the optional courses that are taken and the individual project in level 4 must be in the area of the strand. The required and optional courses are listed in the table below:

Advice if you want to choose a strand. In semester 2 of level 3 you must choose:

- Operating Systems OS(H) and Network Systems NS(H) for the Systems strand;
- Text as Data TD(H) and Database Systems DB(H) for the Data Science strand;
- Cyber Security Fundamentals CSFu(H) for the Security strand.

If you want to keep your options open, then choose the courses required for two of the above strands in semester 2 of level 3. This will then leave four of the five strands open to you in level 4. This may leave you with one other choice for semester 2 of level 3 (you must choose a total of four courses).

On the other hand, if you are sure of the strand you want to take, then choose as many strand courses in level 3 as possible, then what you learn can be used in your level 4 individual project.

Strand	Compulsory Courses	Optional Courses
Data Science	DB(H) (semester 2, level 3) TD(H) (semester 2, level 3)	Choose at least 6 from: AI(H) (semester 2, level 3/4) BD(H) (semester 2, level 4) CVMA(H) (semester 1, level 4) DL(M) (semester 2, level 4) IR(H) (semester 2, level 4) ML(H) (semester 1, level 4) RF(H) (semester 2, level 3/4) RS(H) (semester 2, level 4) WS(H) (semester 1, level 4)

Human Computer Interaction		Choose at least 3 from: CSI(H) (semester 1, level 4) HCI(H) (semester 1, level 4) HCS(M) (semester 2, level 3/4) MobHCI(H) (semester 2, level 3/4)
Security	CSFu(H) (semester 2, level 3) ECS(M) (semester 1, level 4)	Choose at least 2 from: CSFo(M) (semester 2, level 3/4) CSD(H) (semester 2, level 4) HCS(M) (semester 2, level 3/4) SCS(H) (semester 2, level 4)
Systems	NS(H) (semester 2, level 3) OS(H) (semester 2, level 3)	Choose at least 3 from: ASEP(H) (semester 1-2, level 4) ANS(H) (semester 1, level 4) ANC(H) (semester 1, level 4) ASP(M) (semester 2, level 4) CA(H) (semester 1, level 4) DPT(H) (semester 1, level 4) FP(H) (semester 1, level 4) SCS(H) (semester 2, level 4)
Theoretical Computer Science		Choose at least 5 from: ALGII(H) (semester 1, level 4) CP(M) (semester 2, level 3/4) FP(H) (semester 1, level 4) ML(H) (semester 2, level 3/4) MRS(H) (semester 1, level 4) PL(H) (semester 2, level 3/4) TC(H) (semester 1, level 4)

CS3H (UGS)

The CS3H level 3 curriculum in Singapore has the following fixed structure.

Professional Software Development PSD(H)	Algorithmics I ALGI(H)	Systems Programming SP(H)	Interactive Systems IS(H)	Programing Languages PL(H)	Team Project TP(H)
Professional Software Development PSD(H)	Database Systems DB(H)	Network Systems NS(H)	Operating Systems OS(H)		Team Project TP(H)

Professional Skills and Issues PSI(H) then runs in the summer, as part of the 4-week Overseas Immersion Programme. It is compulsory for all CS3H (UGS) students.

SE3H and SEWP3M

SE3H and SEWP3H have the same options as CS3H (UG) described above but with different additional requirements.

For SE3H the requirements are:

- summer placement (between levels 3 and 4);
- at least one from Advanced Software Engineering Practices ASEP(H) and IT Architecture ITA(M) (level 4);
- at least one security course (semester 2 of level 3 or level 4): Cyber Security Fundamentals CSFu(H), Cyber Security Forensics CSFo(M), Enterprise Cyber Security ECS(M), Human-Centred Security HCS(M) or Safety Critical Systems SCS(H);
- Professional Skills and Issues (semester 1 of level 4).

For SEWP3M there are the following additional requirements:

- full year industrial placement (level 4);
- Software Engineering Individual Project (level 5);
- Reading in Software Engineering (level 5);
- at least one from Advanced Software Engineering Practices ASEP(H) and IT Architecture ITA(M) (level 5);
- at least one security course (semester 2 of level 3 or level 5): Cyber Security Fundamentals CSFu(H), Cyber Security Forensics CSFo(M), Enterprise Cyber Security ECS(M), Human-Centred Security HCS(M) or Safety Critical Systems SCS(H);
- Professional Skills and Issues (semester 1 of level 5).

ESE3H

The ESE3H level 3 curriculum is fixed and has the following structure.

Professional Software Development		Systems Programming			Team Project TP(H)
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PSD(H)		SP(H)			
Professional Software Development PSD(H)		Network Systems NS(H)	Operating Systems OS(H)		Team Project TP(H)

The remaining (non-computing science) courses in level 3 for Electronic and Software Engineering are:

- Communication Systems 3;
- Control EE 3;
- Electronic Systems Design 3;
- Real-time Computer Systems 3;
- Either Digital Circuit Design 3 or Engineering Mathematics 3.

Requirements for Electronic and Software Engineering in level 4 are:

- Computer Arch and Communications 4 – Engineering (20 credits);
- Engineering or CS ESE Project (40 credits);
- at least one from Advanced Software Engineering Practices ASEP(H) and IT Architecture ITA(H);
- Professional Skills and Issues PSI(H).

CS3+H

In level 3 CS3+H students must take 60 credits in Computing Science including:

- PSD(H) and TP(H) (both 10 credits run over both semesters);
- choose at least two of the following four first semester options: ALGI(H), DF(H) and IS(H), SP(H);
- in the second semester choose remaining course(s) from the optional courses (subject to timetabling constraints and pre-requisites).

Additional requirements for Combined Honours in level 4 are:

- 60 credits in Computing Science;
- smaller individual project (20 credits);
- 40 credits from optional courses (subject to timetabling constraints and pre-requisites).

CS3 and CS3+ (Designated)

The CS3 designated level 3 curriculum is fixed with the following structure.

Professional Software Development PSD(H)		Systems Programming SP(H)	Interactive Systems IS(H)	Data Fundamentals DF(H)	Team Project TP(H)
Professional	Database				Team Project

Software Development PSD(H)	Systems DB(H)				TP(H)
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The remaining 40 credits are to be chosen from other non-computing subjects.

In the case of the CS3+ designated curriculum, students must choose any two of the above courses; take 40 credits in other non-computing subjects and meet requirements for designated degree in other subject.

2.11 OPTIONAL LEVEL 3 COURSES

CS3H and CSH+ students in level 3 semester 2 can choose from:

- Constraint Programming CP(H);
- Cyber Security Forensics CSFo(H);
- Cyber Security Fundamentals CSFu(H) (must take in level 3 if you want to take ITA(H) in level 4);
- Database Systems DB(H) (must take in level 3 if you want to take BD(H) in level 4);
- Information Retrieval IR(H);
- Human Centred Security HCS(M) (must take this or TC in level 3 if you want to take both);
- Machine Learning ML(H) H (must take this or RF in Level 3 if you want to take both);
- Network Systems NS(H) (must take in level 3 if you want to take ANS(H), DAS(H) or BD(H) in level 4);
- Operating Systems OS(H) (must take in level 3 if you want to take AOS(M), DAS(H) or BD(H) in level 4);
- Robotics Foundations H (must take this or ML in Level 3 if you want to take both);
- Text as Data TD(H) (must take in level 3 if you want to take RS(H) in level 4);
- Theory of Computation TC(H) (must take this or HCS in level 3 if you want to take both).

CSH+ students note that a pre-requisite for both NS(H) and OS(H) is AP(H), for TD(H) is DF(H) and for TC(H) is ALGI(H).

All courses are scheduled over a single day and some courses are timetabled on the same day this can mean you are very busy on one day, but can also mean you have a day free from lectures plan ahead to minimise/maximise this (some semester 2 courses can be taken in either level 3 or 4) we recommend you take 40 credits in each semester of level 4 do not overload semester 2 of level 4, given the importance of the individual project (40 credits)

If a course is offered at level 4 and M, choose level 4 advisory guideline: choose at most one course at level M and discuss choosing **one** of the following M level choices. Further information about each level H course can be found on the respective Moodle course pages.

11 LEVEL 4 (UG & UGS)

The Level 4 curriculum consists of a project course that is compulsory for all students (apart from MEng4 students), and a range of optional courses, or electives. The number of electives that you will take depends on the class you belong to. Refer to moodle2.gla.ac.uk/course for a list of the level 4 electives available this session.

Level M courses are generally at a higher level than level H courses. Thus you will be able to pursue your studies to considerable depth in the topics that interest you most. If you are in doubt about whether a particular course will suit you, study the syllabus, consult the course coordinator, or simply attend the first few lectures.

WEEK	SEMESTER	PROGRAMME UG STUDENTS	
1	1	Project Allocation	Project
2-11		Electives	
12-13		Submit Project Summary	
14-16	Christmas/New Year Vacation		
17-25	2	Electives	Project
26		Project Demo	
27		Project Presentation and Hand in	
28-30	Spring Vacation		
31	Revision		
32-35	Exams		

UG Students are encouraged to consult your adviser of studies if you are in any doubt about your level 4 course choices. The level 4 year head is also available to provide advice.

NB: All UG Level 4 students, except ESE4H and CS4H+ students, are required to take at least one of the following five security courses as an elective. This is required for the purposes of BCS accreditation.

- Cyber Security Fundamentals (H)
- Cyber Security Forensics (H)
- Enterprise Cyber Security (M)
- Human-Centred Security (M)
- Safety Critical Systems (H)



NB: Level 4 UG students are allowed to take **Research Methods and Techniques (H)** as one of their electives. This course will teach you how to do research and how to write your project report.

WEEK	SEMESTER	PROGRAMME UGS STUDENTS	
	Summer	Professional Skills and Issues	
0	1	Safety Critical Systems	
1		Project Allocation	Project
2-11		3 Courses	
12-13		Submit Project Summary	
14-16	Christmas/New Year Vacation		
17-25	2	4 Courses	Project
26			Project Demo
27		Project Presentation and Hand in	
28-30	Spring Vacation		
31	Revision		
32-35	Exams		

2.12 UGS COURSES

Course		Semester
PSI(H)	Professional Skills and Issues	Summer
DAS(H)	Distributed Algorithms and Systems	1
HCI(H)	Human Computer Interaction	1
FP(H)	Functional Programming	1 & 2
SCS(H)	Safety Critical Systems	1 (week 0)

BD(H)	Big Data	2
CS(H)	Cyber Security Fundamentals	2
MHCI(H)	Mobile HCI	2
MMSA(H)	Multimedia Systems and Applications	1

2.13 LEVEL 4 COURSES

Every course consists of about 20 lectures with supporting tutorials and/or workshops, scheduled via three 1-hour classes per week either in Semester 1 or Semester 2, (with the exception of PSI(H) which runs in semester 2 and has 2 classes per week). CSC(H) runs in both semesters where most of the contact time will involve small-group sessions organised to suit the students' timetables. Similarly the UGS-based PSI and SCS courses are taught in block mode over the summer vacation.)

Occasionally, lectures, tutorials or seminars may be delivered by research assistants, research students or external speakers – their specialist knowledge and expertise often adds a great deal of value to the course in question. Their use will however be limited. This may not apply in the case of ECS(M), ITA(M), SEFS(H) and PSI(H) as these courses are specifically designed to involve external speakers to a greater extent.

2.14 FLEXIBLE WORKING SPACE (*LEVEL 3 AND 4 STUDENTS ONLY*) (UG)

There is a separate flexible working space for study needs and interaction located in the centre area of BO618. Consumption of food and drink in this designated area is permitted, but please be considerate to others who may be working nearby, and please remember to put all rubbish in the bin.

2.15 PROJECTS

All students (except M.Eng) are required to undertake an individual project in Level 4. [Guidelines for the Conduct of Projects](#)¹⁵ are posted on the web. The weighting of the project depends on the class you belong to.

The deadline for the project dissertation to be submitted is **in the final week of the second teaching period** – the exact date will be found on Moodle. You should therefore ensure that any development of the product is completed by the middle of Semester 2 at the latest, in order to allow plenty of time for the dissertation write-up. You must submit an electronic copy of your project. You should also retain a copy for your own use (e.g., to show to prospective employers). Each project is assessed by the supervisor and an assigned *reader*, normally a member of academic staff.

Any project that is submitted late without reasonable justification (such as medical circumstances, for which appropriate supporting documentation must be provided) will incur a penalty of two bands per working day, or part thereof, beyond the submission deadline. Projects handed in 5 days late will be awarded an H band. Late submissions on the basis of medical or other mitigating circumstances should be approved by the projects co-ordinator before the project submission deadline.

It is vital to make as much progress as possible on project work prior to the Christmas vacation, since you will find in Semester 2 that you will be very busy with writing the project dissertation and with coursework deadlines. Be sure to make good use of the two dedicated weeks for project work at the end of Semester 1. At the end of Semester 1 you will be required to write a short project summary (describing the project aims, work carried out to date and work planned for the next semester).

¹⁵ moodle2.gla.ac.uk/course/

This will be assessed by your supervisor and his/her impression of the summary will form part of the professional conduct component of the overall project assessment.

During the penultimate week of Semester 2, you will be expected to demonstrate any software arising from your project to your supervisor and reader, and during the following week (i.e., the same week as the hand-in deadline), you will be required to make a short oral presentation on your project to your supervisor, reader, and other interested staff and students.

PLEASE NOTE: THE MAIN SECTION (EXCLUDING APPENDICES) OF THE PROJECT REPORT MUST NOT EXCEED 50 PAGES FOR 40-CREDIT PROJECTS, 40 PAGES FOR 30 CREDIT PROJECTS AND 30 PAGES FOR 20 CREDIT PROJECTS.

Your project will be marked independently by your supervisor and reader. The precise marking scheme will depend on the nature of the project. Your supervisor will discuss the details of the marking scheme for your own project with you. However, the professional conduct and presentation skills components, each with a 5% weighting, cannot be altered.

University regulations and the BCS + IET require that a student should obtain an overall pass (i.e., D3 or above) for the Level 4 individual project in order to graduate with an Honours degree.

Note 1: special arrangements apply to projects for ESE4H students – see Section 4.3 of Part II.

Note 2: if your project involves the participation of other people, for example in an evaluation, then you should complete an ethics checklist form, and you may also need to apply for approval from the School Ethics Committee. See www.dcs.gla.ac.uk/ethics for more details.

2.16 ESE4H PROJECTS

BSc and BEng students are required to undertake an individual project in ESE4H. Projects may be supervised by CS or E&EE staff, depending upon the emphasis of the project work.

The deadline for the project is provisionally week 27. Towards the end of the Semester 2 teaching period you will be required to make a short oral presentation on your project to interested staff and students, and (where appropriate) to demonstrate your software.

2.16.1 *SIGNIFICANCE OF THE PROJECT*

The project counts for about 20% of the overall assessment for the ESE Honours degree. Therefore, you should dedicate a substantial amount of time and effort to the project work (Both schools recommend to allocate around 400 hours to the project, spread over the two semesters of the last year). **However**, you should not forget that there are other courses as well and you should ensure that you will have sufficient time to attend the lectures and study for the exams.

University regulations require that a student obtains an overall pass (i.e., D3 or above) for the Level 4 individual project in order to graduate with an Honours degree. It is also a requirement for degree accreditation by the BCS and IET that a student obtains an overall pass (i.e., D3 or above) for the Level 4

individual project. However, if you put a reasonable effort into the project work, and discuss problems regularly with your supervisor, you should not fail the project.

Depending on the emphasis of the project topic, you will either have a supervisor in CS or a supervisor in E&EE.

2.16.2 PROJECT ASSESSMENT

For ESE projects supervised by Computing Science, the assessment arrangements will be confirmed by the Project Co-ordinator.

2.17 ASSESSMENT AND EXAMINATION

Typically, students tend to achieve higher bands for their assessed coursework than for examinations. After your assessed exercises have been returned to you, you may be asked to make them available for inspection by the External Examiner. So please keep them, and *do not alter them in any way*.

A	1st class standard (~ 70-100%)
B	upper 2nd class standard (~ 60-69%)
C	lower 2nd class standard (~ 50-59%)
D	3rd class standard (~ 40-49%)
E	narrow fail (~30-39%)
F	clear fail (~20-29%)
G	clear fail (~10-19%)
H	clear fail (0-9)

2.17.1 FINAL EXAMINATION

Most courses are examined by a paper of 120 minutes' duration. The format of the paper will depend on the course. The exact rubrics of all papers will be posted during the session.

Within Level 4 the relative weightings of the components are as shown in the table below. These correspond to the credits allocated to the various components. Note that for SE / ESE students, the summer placement is counted as part of the third year, and the score for the placement is incorporated, retrospectively, into the Level 3 component of the assessment.

COHORT	ELECTIVE COURSES	PROJECT
CS4H (UG & UGS)/M	8 × 1	4
SE4H/M	8 × 1	4
MobSE4H/M	8 × 1	4
INF4H	8 × 1	4
CS4H+	4 × 1	2

2.18 CONVERSION OF FINAL AGGREGATION SCORES INTO HONOURS CLASS

Each course and project in Levels 3 and 4 is assigned a band and associated score based on the notional mapping to percentages indicated in the table on [Moodle](#). The degree classification is based on a student's overall performance in levels 3 and 4. The relating weightings of Level 3 and Level 4 used in computing a student's final degree classification are shown in the following table:

SUBJECT	% OF TOTAL
Level 4, including Project and PSI(H) (if applicable)	60
Level 3, including Team Project and Placement (if applicable)	40
Total	100

The above does not apply to ESE4H students – refer to Section 3.4 in Part II for details.

Where the mean overall aggregation score falls within one of the following ranges, the Board of Examiners shall recommend the award stated:

18.0 to 22.0	First Class Honours
17.1 to 17.9*	Either First Or Upper Second Class Honours
15.0 to 17.0	Upper Second Class Honours
14.1 to 14.9*	Either Upper Or Lower Second Class Honours
12.0 to 14.0	Lower Second Class Honours
11.1 to 11.9*	Either Lower Second Or Third Class Honours
9.0 to 11.0	Third Class Honours
8.1 to 8.9*	Either Third Class Honours Or Fail
0.0 to 8.0	Fail

*The Board of Examiners shall have discretion to decide which of the alternative awards to recommend.

12 LEVEL 5 (UG)

2.19 AIMS AND OBJECTIVES

Level 5 is the final element in programmes leading to the Master in Science (MSci) in Computing Science, Software Engineering, Informatics, Computing Science combined with another subject. These programmes are extensions to the Honours programmes each providing a full five year Masters programme offered as a first degree. They are designed as research-oriented programmes and thus feature a research project in the 5th year of study, as well as other research-related taught material.

Full specifications of all the MSci programmes, including detailed aims and objectives, can be found on the Senate website: www.gla.ac.uk/services/senateoffice/programmesearch/

MSci in Computing Science; MSci in Software Engineering; MSci in Informatics; MSci in Computing Science combined with another subject

2.20 PROGRAMME STRUCTURE AND CALENDAR

Note: The following description applies to the MSci programmes in Computing Science, Software Engineering and MSci in Informatics. For details of the content and organisation of the MSci in Computing Science combined with another subject, please consult the Programme Specification or contact the MSci Programme Director.

The Level 5 curriculum consists of the following components: a set of mandatory courses, a research proposal and project and elective courses. The following table summarises these programme components including the semester in which they are taken and their credit value:

COMPONENT	CREDIT	SEMESTER
MSci Research Proposal and Project	80	1 & 2
Project Research Readings in CS	10	2
Research Methods and Techniques*	10	1
Elective 1	10	1 or 2
Elective 2	10	1 or 2

*(If done in level 4, take a level M elective instead)

2.21 MSci PROJECT

The following applies to Computing Science and Software Engineering Projects. Details of the arrangements for MSci in Computing Science combined with another subject can be obtained from the MSci Programme Director.

The MSci Proposal and Project is the single most important element in Level 5, making up 80 out of 120 credits. All MSci students must undertake the MSci Project in Level 5. The MSci Proposal and Project is split into a Research Proposal and a Research Project stage. The Proposal stage is carried out during the first semester and the Project stage over the first and second semester (once the Proposal is complete).

Students are expected to decide on a project topic and find a suitable supervisor. A short project outline and the name of the supervisor must be sent to the MSci Project Coordinator before the start of the academic session. Students will be notified of project allocations as soon as possible at the start of the academic session. Full details of the MSci project proposals and the conduct of projects, including deadline dates, can be found on Moodle.

Students returning from placement on the SEWP3M programme undertake a smaller 40 credit MSci research project, allowing more time for advanced taught courses. The project should have a similar scope to those for combined MSci students, and requires the completion of a proposal, presentation and research paper.

2.21.1 RESEARCH PROPOSAL STAGE

First you will work on a one-to-one basis with your supervisor to develop a realisable research project proposal. During Semester 1 you will submit a report defining the research problem, and proposing an approach and work plan for tackling this problem. The problem must be related to your Masters specialism and must be of a suitable level of difficulty; the approach must be appropriate and feasible; and the work plan must be realistic. Your report must justify the choice of problem and the approach. It must also include a comprehensive literature survey covering the research problem, critically reviewing relevant work in this research area.

Assessment is carried out by the Project Proposal supervisor and an additional academic assessor, based on the submitted report.

2.21.2 RESEARCH PROJECT STAGE

After submitting the proposal in semester 1, over the remainder of semester 1 and all of semester 2, you will carry out an investigation of the research problem agreed in the Research Proposal. This investigation will include regular meeting with your supervisor. By the end of the project you will submit a scientific paper (14 pages) that presents the results of your investigation. Your paper should reflect work of Masters character and quality, including a well-defined thesis and argument; evidence of a substantial literature review; research using appropriate methods and presenting valid results; and critical evaluation of the results, their significance, and their relationship to other relevant work. In addition to the scientific paper, you will give an Oral Presentation of your investigation to the relevant research group (worth 5 credits).

PLEASE NOTE: THE HAND IN FOR THE PROJECT IS IN THE FORM OF A 14 PAGE ACADEMIC PAPER. YOU MUST USE THE PROVIDED LATEX TEMPLATE

The Research Project and Oral Presentation will be assessed by the project supervisor and a nominated reader, using a marking scheme appropriate to the project. More details of the assessment scheme will be found on Moodle.

Finally, you will create an EPSRC-style research proposal (5 pages max) for a research project that would follow on logically for your current project, and present it in a poster session after the Easter break (5 credits for proposal and poster session).

2.22 EXAMINATION AND ASSESSMENT

The final MSci degree classification is based on a student's overall performance in levels 3, 4 and 5. See Sections 4.5. The Board of Examiners shall have discretion to decide which of the alternative awards to recommend.

Students who fail to achieve a passing result for the MSci will be considered for the award of a BSc Hons degree, based on their results in levels 3 and 4, using the normal weighting for the relevant BSc Hons degree.

If a student has taken a Software Engineering summer placement prior to joining the MSci programme, that placement will be treated as a component of their 3rd year of study for purposes of assessment and credit allocation.

Students in Level 4 complete a year-long placement. Should there be any issue with the placement, the student may re-enter Level 4 of the standard BSc (Hons) Software Engineering programme.

SUBJECT	% OF TOTAL
Level 5, including project	40
Level 4, including Project and PSI4/M	36
Level 3, including Team Project and Placement (if applicable)	24
Total	100

APPENDIX A - PLAGIARISM GUIDELINES (UG & UGS)

The guidelines for preparing submitted work can be summarised simply as follows:

- Do your own work; do not expect anyone else to do any part of it for you.
- Whenever you have good reason to include or summarise another person's work, acknowledge it clearly.
- Take care not to allow any other student to copy your work.

You should of course discuss your work with your lecturers, supervisors, tutors, and demonstrators, and seek help when needed. You may also discuss your work with other students in order to share ideas (provided that you do not share code, plans, or designs). Such discussions are a normal and healthy part of higher education.

Guidelines for software development (programs, spreadsheets, databases, etc.)

In the context of software development, plagiarism arises if you submit code written by another person, presenting it as your own work.

Copying another student's code is never acceptable, whether the code is typed in from a hand-written draft, typed in from a discarded printout, or copied electronically.

If you allow another student to copy your code, you are party to plagiarism; note that this includes making your code available to the public on websites such as GitHub. If you attempt to disguise copying by, for example, changing identifiers or comments, that does not change the fact of plagiarism.

If you collaborate with another student on what was meant to be an individual piece of programming work, and if you conceal the collaboration, that is plagiarism. If you clearly acknowledge the collaboration, that is not plagiarism, but you will be assessed on the basis of your share of the work only.

If you reuse program code obtained from any source (such as a web site or textbook), that is plagiarism unless you clearly acknowledge the source. In larger programming assignments and projects, it is legitimate to reuse code with acknowledgement, but you will be assessed on the basis of your own code.

Examples

- **Acceptable:** Student A reminds student B where to find a file of source code provided by the lecturer.
- **Acceptable:** Students A and B, discussing a programming assignment, decide that the quick-sort algorithm would be a suitable choice; each student then goes away and codes that algorithm independently.
- **Acceptable:** Student A refers student B to a textbook example that illustrates a programming technique relevant to the current assignment.
- **Acceptable:** Student A shows student B how to use a compiler feature.
- **Unacceptable:** Student A tells student B how to do the current assignment.
- **Unacceptable:** Student A finds a discarded printout of a program, retypes it, perhaps changing identifiers and comments in an attempt to disguise the source.
- **Unacceptable:** Student A shows student B part of a solution to the current assignment.

- Deprecated:** As above, but student B clearly acknowledges the help from student A. Although this is not plagiarism, student B will lose marks for not completing the assignment individually.

- Unacceptable:** Student A reuses code from a textbook, without acknowledgement.

- Deprecated:** Student A reuses code from a textbook, but acknowledges its source by a comment prominently placed beside the code. Although this is not plagiarism, the student will not receive marks for the reused code unless the assignment clearly encourages such reuse.

- Unacceptable:** Students A and B collaborate on the design of a large program; each student then goes away and implements that design.

- Acceptable:** Students A, B, C, and D work together on a team programming assignment, stating clearly who did what.

GUIDELINES FOR ESSAYS

In the context of an essay (whether coursework or examination), plagiarism arises if you include any text, diagrams, images, or even ideas generated by another person, presenting these as your own work.

Occasionally it may be appropriate for you to quote another person's words verbatim, provided that you enclose the words in quotation marks and immediately acknowledge their source. For example:

"Testing can prove the presence of errors, but can never prove their absence." [Dijkstra]

Even where your essay summarises or paraphrases another person's work, you must still explicitly acknowledge it.

If you copy another student's essay (or any part of it), that is plagiarism. If you allow another student to copy your essay, you are a party to plagiarism.

If your essay includes diagrams, images, etc., taken from other sources, you must cite these sources. Failure to cite a source would amount to presenting another person's work as your own, which would be plagiarism.

Examples

- Acceptable:** Students A and B discuss the issue that is to be the subject of an essay assignment; both students then go away and write their essays independently.

- Unacceptable:** Students A and B write an essay together; each student then goes away and makes changes.

- Unacceptable:** Student A downloads an essay from an essay bank, perhaps making changes.

- Unacceptable:** Student A asks a friend to write an essay for him/her.

GUIDELINES FOR WRITING PROJECT REPORTS/DISSERTATIONS

Every project culminates in a report/dissertation. This is a full account of the project work, and may include code and/or documentation.

In the context of a report/dissertation, plagiarism arises if you include any text, diagrams, images, data, code, documentation, or even ideas generated by another person, presenting these as your own work.

A report/dissertation is expected to review relevant previous work. For example, every software development project should be influenced by ideas from previous projects; and every research project should be informed by

relevant previous research. Your report/dissertation must therefore include a bibliography, which lists all books, articles, web sites, etc. that you consulted in the course of your project. In the text of your report/dissertation, wherever you mention previous work, you must explicitly cite the appropriate bibliographic item(s). Failure to cite the source would amount to an attempt to present another person's ideas as your own, which would be plagiarism.

Occasionally it may be appropriate for you to quote another person's words verbatim, provided that you enclose the words in quotation marks and immediately acknowledge their source. For example:

"Testing can prove the presence of errors, but can never prove their absence." [Dijkstra]

If your report/dissertation includes diagrams, images, data, etc., taken from other sources, you must cite these sources. Failure to cite a source would amount to presenting another person's work as your own, which would be plagiarism.

Examples

- **Acceptable:** The survey chapter of a student's report summarises ideas previously published in an article, which is listed in the bibliography and explicitly cited in the survey chapter.
- **Unacceptable:** As above, but the article is not explicitly cited in the survey chapter.
- **Unacceptable:** A student reproduces or paraphrases text from a published article or another student's report, without explicit acknowledgement.
- **Unacceptable:** A student reproduces an image from a published article or web site or another student's report, without explicit acknowledgement.
- **Unacceptable:** A student's project uses data extracted from a public database or mined from a web site, without explicit acknowledgement.
- **Unacceptable:** A student's project reuses code obtained from a textbook or web site, without explicit acknowledgement.
- **Acceptable:** In a team project, the students collaboratively write software, documentation, and the report. Each student's individual contribution is clearly identified in the report.

Acknowledgements

The following sources have proved useful in the preparation of the policy and guidelines:

1. Plagiarism Statement, University of Glasgow,
www.gla.ac.uk/services/senateoffice/studentcodes/staff/plagiarism/plagiarismstatement/
2. Plagiarism Policy, School of Informatics, University of Edinburgh, www.inf.ed.ac.uk/teaching/plagiarism.html.
3. Guidelines on Plagiarism, School of Informatics, University of Edinburgh,
www.inf.ed.ac.uk/admin/ITO/DivisionalGuidelinesPlagiarism.html.

USE OF TURNITIN

We are very good at spotting plagiarism in Essays and Dissertations. Therefore, it is in your best interest to eliminate plagiarised sections from your writing before submitting it. To help you with this, we will give you access to on-line application, Turnitin www.submit.ac.uk

Briefly, you can upload a piece of writing for an exercise and it will compare it with a range of online and student materials, identifying sections in common. We would regard as plagiarism the inclusion of large sections of identical material and so you should use Turnitin before submission, to ensure that you do not have a problem.

This will be discussed further in Professional Skills and Issues.

CONTRACT CHEATING

Please note that the use of a service such as Freelancer, VWorker, Getacoder or EssayBay to do your coursework for you is a disciplinary offence. It could even lead to expulsion. These websites are monitored and if any of our assignments are found we will investigate further. It is best to do your own coursework so that you can gain the full benefit from your learning experience here at Glasgow.

THE UNIVERSITY OF GLASGOW PLAGIARISM STATEMENT

The following is an extract from the University of Glasgow Plagiarism Statement. The full statement can be found in the University Calendar see www.gla.ac.uk/services/senateoffice/policies/calendar/calendar2017-18/

31.1 The University's degrees and other academic awards are given in recognition of a student's **personal achievement**. All work submitted by students for assessment is accepted on the understanding that it is the student's own effort.

31.2 Plagiarism is defined as the submission or presentation of work, in any form, which is not one's own, without **acknowledgement of the sources**. Special cases of plagiarism can also arise from one student copying another student's work or from inappropriate collaboration.

31.3 The incorporation of material without formal and proper acknowledgement (even with no deliberate intent to cheat) can constitute plagiarism.

Work may be considered to be plagiarised if it consists of:

- a direct quotation;
- a close paraphrase;
- an unacknowledged summary of a source;
- direct copying or transcription.

With regard to essays, reports and dissertations, the rule is: if information **or ideas** are obtained from any source, that source must be acknowledged according to the appropriate convention in that discipline; and **any direct quotation must be placed in quotation marks** and the source cited immediately. Any failure to acknowledge adequately or to cite properly other sources in submitted work is plagiarism. Under examination conditions, material learnt by rote or close paraphrase will be expected to follow the usual rules of reference citation otherwise it will be considered as plagiarism. Schools should provide guidance on other appropriate use of references in examination conditions.

31.4 Plagiarism is considered to be an act of fraudulence and an offence against University discipline. Alleged plagiarism, at whatever stage of a student's studies, whether before or after graduation, will be investigated and dealt with appropriately by the University.

31.5 The University reserves the right to use plagiarism detection systems, which may be externally based, in the interests of improving academic standards when assessing student work.

If you are still unsure or unclear about what plagiarism is or need advice on how to avoid it,

SEEK HELP NOW!

You can contact any one of the following for assistance:

Lecturer

Course Leader
















Dissertation Supervisor

Adviser of Studies













Student Learning Service¹⁶

¹⁶ www.gla.ac.uk/services/sls/plagiarism/whatisplagiarism/


APPENDIX B – CONDITIONS OF USE (UG & UGS)

Prohibited			
	Using Equipment for Commercial Purposes		Game Playing
	Food and Drink in labs		Mobile Phones with Activated Ring Tone
	Accessing Offensive Material		Unapproved Installation of Software
	Copying Software without Approval		Tampering with Equipment
	Use of Unapproved Software		Use another year's lab
	Sharing your password		Storing Excessive amounts of non-teaching material
	Lock the machine for more than 10 minutes while you are away		Listening to music during lab sessions
	<u>Data must not be stored or manipulated in contravention of the Data Protection Act.</u> For example, if you store other people's personal data (perhaps from evaluations of your project or coursework) you must anonymise it.		

Permitted

	Connect Memory Stick	
	Storing your address book	
	Email (Note that the privacy of your email is not guaranteed)	
	Connect your personal devices (e.g. laptops, phones etc.) to the university wireless network	
	Listening to music outside lab times with earphones	
	Excessive Web Browsing	Discouraged 

 Always	Abide by University Email Regulations http://www.gla.ac.uk/services/it/regulationscommitteesandpolicies/ http://www.gla.ac.uk/myglasgow/it/regulationscommitteesandpolicies/email/
 Always	Follow Instructions given by staff members

	The privacy of files in your filestore is not guaranteed . Support staff may, in the course of their duties, be required to explore and read files in your file store.
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APPENDIX C – CODE OF ASSESSMENT (HONOURS STUDENTS) (UG & UGS)

University 22 point scale associated with Aggregation Scores

The University Assessment Code subdivides grade A into 5 bands. Grades B-F are sub-divided into three bands, and grade G into two bands. For each band, there is a corresponding “aggregation-score” (in the range 1-22), which will be used for aggregation purposes and the award of classifications. The fourth row of the table below shows an example of a Computing Science mapping of percentages to each Band/Grade – this may differ from School to School.

The Descriptors associated with Honours classifications in the University Assessment Code are:

Primary verbal descriptors for attainment of Intended Learning Outcomes	Primary Honours classification	Aggregation scores (aggregated over course bands)
Exemplary range and depth of attainment of intended learning outcomes, secured by discriminating command of a comprehensive range of relevant materials and analyses, and by deployment of considered judgement relating to key issues, concepts and procedures	First	22 21 20 19 18
Conclusive attainment of virtually all intended learning outcomes, clearly grounded on a close familiarity with a wide range of supporting evidence, constructively utilised to reveal appreciable depth of understanding	Upper Second	17 16 15
Clear attainment of most of the intended learning outcomes, some more securely grasped than others, resting on a circumscribed range of evidence and displaying a variable depth of understanding	Lower Second	14 13 12
Acceptable attainment of intended learning outcomes, displaying a qualified familiarity with a minimally sufficient range of relevant materials, and a grasp of the analytical issues and concepts which is generally reasonable, albeit insecure	Third	11 10 9
Attainment deficient in respect of specific intended learning outcomes, with mixed evidence as to the depth of knowledge and weak deployment of arguments or deficient manipulations	Weak	8 7 6
Attainment of intended learning outcomes appreciably deficient in critical respects, lacking secure basis in relevant factual and analytical dimensions	Poor	5 4 3
Attainment of intended learning outcomes markedly deficient in respect of nearly all intended learning outcomes, with irrelevant use of materials and incomplete and flawed explanation	Very Poor	2 1
No convincing evidence of attainment of intended learning outcomes, such treatment of the subject as is in evidence being directionless and fragmentary		0

APPENDIX D – IMPORTANT INFORMATION REGARDING EXAMINATIONS AND OTHER ASSESSMENTS (ALL STUDENTS)

REMINDER ABOUT PROHIBITED MATERIALS IN EXAMINATIONS

Section 17 of the Fees and General Information in the University Calendar¹⁷ covers regulations on student conduct in written examinations, and you should pay particular attention to points 3, 4, 5, and 6 on pages 21 and 22:

Please remember to avoid taking any prohibited materials into your examinations. Before you enter the examination room you must **CHECK YOUR POSSESSIONS** to ensure you have no revision notes in pockets or inside permitted material such as dictionaries. Only language dictionaries are permitted – **NOT** subject-related dictionaries. Bringing prohibited material into an examination room by mistake is not acceptable and penalties will be imposed irrespective of whether the material has been used during the examination.

Where an invigilator reports to the Senate that a student has been found with prohibited material, the student concerned is interviewed by the Senate Assessors for Student Conduct (under the provisions of the University's Code of Student Conduct). The Senate Assessors can impose a range of penalties and these can have very severe consequences for the student involved - for example, a common penalty is to award Grade H for the examination in question, with no opportunity to resit. **In some cases, this can have the effect of preventing students from completing their degree, or from graduating.**

DO NOT PUT YOUR DEGREE AT RISK

1) Your responsibilities if you believe that illness or other circumstances have affected your academic performance in any assessment (including an examination)

It is **YOUR** responsibility to bring any factors that may have affected your academic performance to the attention of the University and you must do this **as soon as possible**.

The Code of Assessment which is published in Section 16 of the Fees and General Information section of the University Calendar www.gla.ac.uk/media/media_541864_en.pdf covers incomplete assessment and good cause (paragraphs 16.45 – 16.53). 'Good Cause' means illness or other adverse personal circumstances affecting you and resulting in you missing an examination, or failing to submit coursework on time, or your performance in the assessment being clearly prejudiced. [Chronic illness is not covered unless there has been a short term worsening of the condition which specifically affects an assessment. If you have a long term chronic medical or mental health condition you are encouraged to register with the Disability Service if you haven't already done so. Further information is available at www.gla.ac.uk/services/disability/].

If it is accepted that your assessment was affected by good cause, the work in question will be set aside and you will (as far as is practicable) be given another opportunity to take the assessment with the affected attempt discounted. **Please note that Boards of Examiners are not permitted to award marks on the basis of undemonstrated**

¹⁷ <http://www.gla.ac.uk/services/senateoffice/policies/calendar/>

performance and therefore your grade(s) will not be increased because your performance was impaired by medical or other personal circumstances.

Time Limit

You **MUST** notify the University no later than one week (i.e. within 7 days) after the date of the examination or the due date for submission of the assessment affected. The information you provide will be treated confidentially.

Please do not shy away from divulging important information. It will be treated sensitively. Without your information the Board of Examiners will not be able to take the matter into account. Furthermore, you will not be able to appeal against your assessment result on the grounds of adverse medical or personal circumstances unless you can provide a good reason why this information could not be presented in time.

How to Notify

A notification of good cause and supporting evidence must be completed following the guidelines in the University's Student Absence Policy see: www.gla.ac.uk/services/senateoffice/policies/studentssupport/absencepolicy/

If you were present for the examination, or submitted the assessment, but believe that illness or other personal circumstances affected your performance this must be reported, with appropriate evidence, in a notification of good cause on My Campus.

Evidence of Good Cause

This must be in the form of a report that describes the medical condition or other adverse personal circumstances. The report should include a supporting statement from an 'appropriate person' as defined in the University's Student Absence Policy. (In the event of a short-term worsening of a long-term condition, it is possible for your Disability Advisor to provide such a supporting statement if you have actually consulted the Disability Service during the period when the difficulties were occurring.)

APPENDIX E: SITTING EXAMS AT THE UNIVERSITY OF GLASGOW

Exam candidates (particularly those who are sitting University of Glasgow exams for the first time) should familiarise themselves with the following instructions – this will ensure that time is not wasted with administrative arrangements once the exam has started.

Ensure that you have recorded the correct date / time / venue for your exam and make sure that you know where the venue is located (see the Campus Map www.gla.ac.uk/about/maps/ if necessary). Aim to arrive at the exam hall around 15 minutes before the exam starts. Wait outside the hall until you are called in by the janitor. Your exam may be one of several different ones in the same hall – if so, make sure you know which desk row(s) are set aside for your exam. This information is displayed on a noticeboard outside the exam hall.

When you are called in to the exam room, leave any bags at the front of the exam hall. Ensure that any mobile phones are switched off, and remember to keep your student card with you. Calculators are not normally permitted in any Computing Science exam, so you should ensure that your calculator is left in your bag if you brought one to the exam.

Sit at any free desk in one of the row(s) set aside for your exam. There will still be a few minutes before the exam begins, so during this time you should firstly check that you are sitting in the correct place. Look at the front cover of the exam paper to double-check this, but do not open the exam paper until the invigilator has signalled that the exam has started.

At this time you should also fill in your details on the candidate attendance form (see below) and on the front cover of your script book. Complete the details in Sections 1-6 of the script book cover (see below). Note that the subject is “Computing Science” and the level is MSci, BSc etc. The paper title is the name of the course to which the examination relates, such as “Computing Science 1P”, or “Algorithms and Data Structures 2”, or “Database Systems 3”, etc. Next complete the right-hand side panel of the script book cover (see below) – note that “Surname” means family name, and “Forenames” mean given names. Finally, peel off the adhesive strip and fold over the front cover where the dotted line is shown. Your script book cover should now resemble that shown below (the perforations should not be undone by the candidate). **Take care to read the instructions on the cover of the script book.** Please remember to use blue/black **INK** when answering exam questions. This makes it easier to read your answers.

Place your completed candidate attendance form and your student card to one side of your desk. The former will be collected and the latter will be inspected once the exam begins, and if they are clearly visible to the invigilator, this will reduce disruption for you. Once you have completed these tasks, wait for the invigilator’s signal that the exam has started. You may then open the paper and start. During the exam, if you require an extra script book, raise your hand to attract the invigilator’s attention and he/she will bring one to you.

Towards the end of the exam, make sure that you have filled in the question numbers (in the order answered) and the number of script books used in the table at the bottom-right of your script book (as shown below). The invigilator will signal the end of the exam – at this point you should stop writing and remain seated. You should not talk to the people around you until the signal is given to leave. The invigilator will then collect the script books and once he/she is satisfied that all script books are present and correct, the signal will be given that you can leave the exam room. Try to leave as quietly as possible, as some people doing other exams may still be working. Take care to ensure that you have not left any personal belongings in the exam room, and especially, remember to take your student card with you.



Examination Candidate's Attendance Form

Subject **Computing Science (MSc(IT))** _____

Title of Exam Paper **Programming** _____

Date **29 Apr 2008** _____ Time **9.30 - 11.30** _____

Desk No. **38** _____ Signature **AN Other** _____

Family Name **Other** _____

Given Names **Anthony Neil** _____

Matriculation No.

0	7	1	2	3	4	5													
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To the Invigilator: This completed form should be collected from the candidate in the course of the examination. All attendance forms, together with any lists of candidates provided by the Registry, must be lodged with the Head of Department **before** the scripts are distributed for marking.

Invigilator's comments:

To the Head of Department: This form, together with any lists of candidates, must be held in secure conditions until all scripts have been marked. It should then be retained for six months before disposal.

UNIVERSITY OF GLASGOW

PLEASE COMPLETE SECTIONS 1-6 BELOW

CANDIDATES ARE WARNED THAT MARKS MAY BE LOST THROUGH ILLIGIBLE WRITING.

1. Subject/Level _____

2. Title of Paper _____

3. Date _____ 4. Time _____

5. Matriculation number _____

6. Desk Number _____

NOTES

(a) Write in ink what is to be read by examiners

(b) All writing must be on the right hand page

(c) Leave the margin clear

(d) Rough work must be clearly crossed out

(e) No other script, unless supplied by the Invigilator, is to be used during the examination

(f) No part of this book is to be torn off or removed from the book. It must be handed back to the Invigilator whole and entire.

AFTER THE EXAMINATION

(a) You must enter the question numbers you have attempted in the left hand column of the grid

(b) Check you have entered your matriculation number on every supplementary book or sheet

(c) Enter the number of books/sheets submitted in box at the bottom of the grid.

Question No. in order attempted	Examiner's Mark
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1: The examination script cover

UNIVERSITY OF GLASGOW

PLEASE COMPLETE SECTIONS 1-6 BELOW

CANDIDATES ARE WARNED THAT MARKS MAY BE LOST THROUGH ILLIGIBLE WRITING.

1. Subject/Level... Computing Science (MSc IT)

2. Title of Paper... Programming

3. Date... 29 April 2008 4. Time... 0930-1130

5. Matriculation number 0712345

6. Desk Number 32

NOTES

(a) Write in ink what is to be read by examiners

(b) All writing must be on the right hand page

(c) Leave the margin clear

(d) Rough work must be clearly crossed out

(e) No other script, unless supplied by the Invigilator, is to be used during the examination

(f) No part of this book is to be torn off or removed from the book. It must be handed back to the Invigilator whole and entire.

AFTER THE EXAMINATION

(a) You must enter the question numbers you have attempted in the left hand column of the grid

(b) Check you have entered your matriculation number on every supplementary book or sheet

(c) Enter the number of books/sheets submitted in box at the bottom of the grid.

Question No. in order attempted	Examiner's Mark
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2: Fill in your name on the front of the script, and down the side panel. Tear the plastic off the vertical adhesive strip and fold over.

Remember to use ink in your exam script

UNIVERSITY OF GLASGOW

PLEASE COMPLETE SECTIONS 1-6 BELOW

CANDIDATES ARE WARNED THAT MARKS MAY BE LOST THROUGH ILLIGIBLE WRITING.

1. Subject/Level... Computing Science (MSc IT)

2. Title of Paper... Programming

3. Date... 29 April 2008 4. Time... 0930-1130

5. Matriculation number 0712345

6. Desk Number 32

NOTES

(a) Write in ink what is to be read by examiners

(b) All writing must be on the right hand page

(c) Leave the margin clear

(d) Rough work must be clearly crossed out

(e) No other script, unless supplied by the Invigilator, is to be used during the examination

(f) No part of this book is to be torn off or removed from the book. It must be handed back to the Invigilator whole and entire.

AFTER THE EXAMINATION

(a) You must enter the question numbers you have attempted in the left hand column of the grid

(b) Check you have entered your matriculation number on every supplementary book or sheet

(c) Enter the number of books/sheets submitted in box at the bottom of the grid.

Question No. in order attempted	Examiner's Mark
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3: The script should look like this once you have folded over the side panel

APPENDIX F – EXAM PROCESS & PROCEDURES

This document explains how we arrive at the final marks for Computing Science courses; in particular, how a percentage mark on an exam paper is returned as a point on the University's 22 point scale (corresponding to A1 to H grades).

The School and the University takes these procedures extremely seriously. The School has four external examiners (Two in Undergraduate, one each for Masters and Masters in IT), who are appointed by the Senate Office and report directly to the Senate Office. They provide external scrutiny of our policies and procedures, and are directly involved in the maintenance of our academic standards.

Our procedures are governed by the University's Code of Assessment, which is available at:
<http://www.gla.ac.uk/services/senateoffice/policies/assessment/codeofassessment/guide/>

PRE-EXAM

Exam papers are set by the course lecturer, checked by another lecturer, and when the two are in agreement, sent to the appropriate external examiner for comment/corrections etc. At this stage questions such as the standard of the paper (which the lecturers endeavour to maintain from year to year) are raised as well as error-checking in both the exam paper and marking scheme.

POST-EXAM

The following procedures occur after the exam paper is taken:

- The paper is marked, using the previously agreed marking scheme. The academic draws a red line down the right hand side of the script as everything is marked, to show that it has been assessed.
- After the scripts are marked, another person will visually scan each script to ensure that all work has been marked, so that nothing is missed. This person will then draw a green line down the right hand side of the script and will also check that the marks have been tallied correctly and transferred accurately to the outside of the booklet.
- The marks are entered into School databases, and double-checked for errors.
- A Spreadsheet is produced for each exam, with the School's standard Grade Boundaries applied.
- Scatterplots are also produced that show how each course compares to all other courses, in terms of overall performance, and shows how the bands compare to a particular student's average performance across all their courses. The scatterplots are not available to students.

The basic question that is addressed at the exam boards is: are the grade distributions appropriate? Such academic judgements will take into account a variety of factors. For example, extenuating circumstances may have to be addressed – a mistake in the exam paper may have occurred, or a fire drill may have disrupted the exam.

While the School endeavours to maintain grade boundaries from year-to-year, such circumstances do occur, and the procedures in place are to ensure they are correctly taken into account. These boundaries are discussed between the lecturers involved in the particular year (e.g. all Computing Science Level 4 lecturers), and a recommendation is made for each course. This is informed by the historical data, e.g. grade boundaries from previous years. This collective setting of standards enables the performance of the cohort as a whole to be assessed, with this being fed into the discussions.

- Our recommendations for the grade point boundaries (on the 22 point scale) are presented to the appropriate external examiner. Individual exam scripts are made available to the external. This is an important point – this is not just a numerical exercise – exam scripts are examined by the external examiner to ensure that the decisions are based on academic grounds.

Projects (with marks also returned directly on the 22 point scale) are also discussed at this stage.

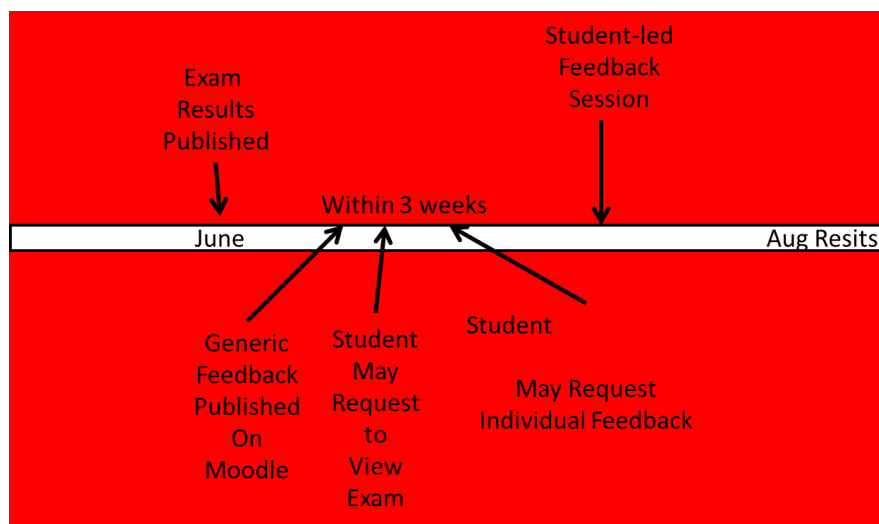
- The final decisions are taken by the full Exam Board, which is attended by the appropriate lecturers, the Year Heads, the Head of School, the Convenor of Teaching and Learning and the external examiners. The Exam Board ratifies the marks and takes into account individual extenuating circumstances. Marks from individual courses – each on the 22 point scale – are combined to arrive at a final grade, in accordance with the University's published procedures. In the case of joint degree programmes, a representative of the other part of the programme attends the Exam Board (or visa-versa) and results for the two components are combined, again in accordance with the University's rules.

The final marks are uploaded directly to MyCampus by the Teaching Administration staff in the School.

I would be happy to explain these procedures further, if required: comments and questions should be sent to: Wim.Vanderbauwhede@glasgow.ac.uk

APPENDIX G –SOCS STUDENT EXAM FEEDBACK POLICY

EXECUTIVE SUMMARY



GENERIC FEEDBACK

Lecturers shall provide generic exam feedback via the course Moodle page, within 3 weeks of publication of exam results. This shall include:

- Comment on how well students coped with each question
- A mapping from learning outcomes to exam questions, so that students can see where they did not achieve the learning outcomes. Where necessary, a pointer to the course slides/textbook will be provided.

INDIVIDUAL FEEDBACK ONLY FOR STUDENTS WHO MUST RESIT TO PROGRESS/GRADUATE

Upon getting exam results, and realizing that they are unable to progress or graduate with the grades they have achieved:

- A student can request to view their exam script within 2 weeks of publication of results. This will be arranged by the teaching admin staff. Students are strongly advised to consult the generic feedback on Moodle at this point.
- If a student **who needs to take the resit to graduate or progress** requires further assistance he/she must do the following:
 - Email the lecturer within the 3 week cut off period to request more feedback.
 - After the cut off period, the lecturer will arrange a feedback session, which can be either individual or in a group.
 - Feedback sessions will be student-driven. Students must attempt the exam questions themselves before the session. Students have to ask specific questions; the lecturer will then explain and clear up misunderstandings. Students do not learn from passive feedback and this ensures active engagement in the process.

For example, we will not respond to: *"How do you do question 2?"* We will respond to questions such as *"I attempted question 2 using a BubbleSort. Why was BubbleSort the wrong choice?"* or *"I thought I should use a While loop to do question 2 – should I have used a For loop?"* or *"I got stuck doing the SQL query in 2(d) – I couldn't make it work with a join. What am I missing?"*

APPENDIX H – HOW TO GENERATE YOUR HEAR FORM MYCAMPUS



University of Glasgow | Student Services
Enquiry Team

1. Click on My Academic Record

Academics

[Enrollment](#)
[My Classes](#)
[My Academic Record](#)
[My Absence](#)
[My Results](#)

[view my timetable](#)
[my choices](#)

other options... ▾ >>

Academic Registration

Term	Academic Year	Career		Status
2013	2013-14	Undergraduate	✓	Completed

Finances

My Account
[Account Inquiry](#)
[Banking Details](#)
[Direct Debit](#)
Financial Aid
[View Financial Aid](#)
[Accept/Decline Awards](#)

Account Summary

You owe 0.00.
▪ Due Now 0.00
▪ Future Due 0.00
This may not reflect recent changes to your tuition and fees. For an updated balance, click on Account Inquiry.
Currency used is Pound Sterling.

[make a payment](#)

Financial Registration

Term	Academic Year	Career		Status
2013	2013-14	Undergraduate	✓	Completed

2. Select View Electronic HEAR

Enrollment

My Classes

My Academic Record

My Absence

My Results

My Academics

Academic Requirements

[View my advisement report](#)

What-If Report

[Create a what-if scenario](#)

Advisors

[View my advisors](#)

Transfer Credit

[Evaluate my transfer credits](#)

[View my transfer credit report](#)

Course History

[View my course history](#)

Transcript

[View Electronic HEAR](#)

Certificate of Student Status

[Request Certifying Letter](#)

My Program:

Institution - University of Glasgow

Career - Undergraduate

Program - Master of Arts

UG Honours - Psychology,MA

3. Click on View Report (Make sure pop-up blockers switch off)

Enrollment

My Classes

My Academic Record

My Absence

My Results

View Report

Choose an institution and report type and press View Report

****this process may take a few minutes to complete. please do not press any other buttons or links while processing is taking place****

Academic Institution

University of Glasgow

Report Type

Electronic HEAR

view report

Information For Students

This section enables you to generate and print/save your own HEAR (Higher Education Achievement Report), sometimes referred to as the Academic Transcript of Studies.

Please note:

If you require a stamped version of your HEAR, you are able to request one from the Student Services Enquiry Team (SSET) following the process outlined at:

www.gla.ac.uk/students/enquiries/documents/

The SSET do not operate a 'hold' service, please only submit a request once you have checked your HEAR information online and you are happy that it includes all the information you require.

Academic information missing or incorrect on your HEAR: contact your School or College.

Non-academic information is missing from your HEAR: contact the SSET in the first instance.

VIEW ALL REQUESTED REPORTS

4. Click View all Requested Reports – allows user to view previously requested HEARs

go to ...

EnrollmentMy ClassesMy Academic RecordMy AbsenceMy Results

View Report

Previous Requests

	Request Date	Description	Institution	User ID	Future Release	Requested Print Date
view report	02/07/2014	Electronic HEAR	GLSGW	1100037M	Immediate Processing	02/07/2014

CANCEL

APPENDIX I – SOCS STUDENT EXAM FEEDBACK POLICY CONDITIONS FOR PROMOTING STUDENTS AT DISCRETIONARY ZONES

The following is a list of necessary and sufficient conditions under which we would normally promote students in a given discretionary zone. The aim is to simplify the decision-making process and maintain consistency.

1/U discretionary zone

- (a) GPA or unrounded mean GPA ≥ 17.7
- (b) GPA or unrounded mean GPA ≥ 17.4 and course grade profile showing at least 50% of weighted Honours credits at A
- (c) GPA or unrounded mean GPA ≥ 17.1 , course grade profile showing at least 50% of weighted Honours credits at A and at most one course in the D-H range

U/L discretionary zone

- (a) GPA or unrounded mean GPA ≥ 14.7
- (b) GPA or unrounded mean GPA ≥ 14.4 and course grade profile showing at least 50% of weighted Honours credits at A/B
- (c) GPA or unrounded mean GPA ≥ 14.1 , course grade profile showing at least 50% of weighted Honours credits at A/B, no “net” Es (*) and at most one course in the F-H range

L/3 discretionary zone

- (a) GPA or unrounded mean GPA ≥ 11.7
- (b) GPA or unrounded mean GPA ≥ 11.4 and course grade profile showing at least 50% of weighted Honours credits at A-C
- (c) GPA or unrounded mean GPA ≥ 11.1 , course grade profile showing at least 50% of weighted Honours credits at A-C, no “net” Fs (**) and at most one course in the G-H range

3/F discretionary zone

- (a) GPA or unrounded mean GPA ≥ 8.7
- (b) GPA or unrounded mean GPA ≥ 8.4 and course grade profile showing at least 50% of weighted Honours credits at A-D
- (c) GPA or unrounded mean GPA ≥ 8.1 , course grade profile showing at least 50% of weighted Honours credits at A-D, no “net” Gs (***) and at most one course with H

(*) for this purpose, As “cancel out” Es.

E.g., suppose a student with GPA 14.2 has 240 Honours credits as follows:

A	B	C	D	E	F	G	H
50	80	50	20	40	0	0	0

The student has $\geq 50\%$ of credits at A/B. Also the As cancel out the Es, so the student would be promoted.

(**) for this purpose, A/B grades cancel out Fs.

(***) for this purpose, A-C grades cancel out Gs.

For the purposes of determining whether a student has at least 50% of weighted Honours credits in a given range, the calculations will be weighted according to the same Level 3 : Level 4 weighting that is used to work out his/her overall Honours GPA.

Similar, for MSci students, the calculations will be weighted according to the same Level 3 : Level 4 : Level 5 weighting that is used to work out their overall GPA.

APPENDIX J – FINANCIAL SUPPORT AVAILABLE TO UNIVERSITY OF GLASGOW STUDENTS

The [University of Glasgow Financial Aid Team](#) offers financial support to registered students who are experiencing financial difficulties or hardship during the course of their studies.

SAAS HEI Discretionary and Childcare Funds

Government funding available via the University to home UK undergraduates and postgraduates who have received their full Student Loans Company (SLC) loan entitlement (when eligible).

Provides support across the academic session under several categories: accommodation; childcare; disability; mature student.

Students who live with their parent(s) are generally ineligible for funding.

Funding does not cover tuition fees and is not intended as a primary source of income.

Applicants must demonstrate clear hardship i.e. a monthly shortfall between income and expenditure across the academic session, in order to be considered.

Applicants must also take reasonable steps to reduce outgoings before submitting an application e.g. reducing budget for socialising; food budget; club memberships etc.

University Hardship Fund

University funds available to part-time and full-time registered students.

Students should exhaust all other resources available to them before submitting an application e.g. personal loans, overdraft etc.

The fund will not provide ongoing support to any single individual.

Applications from students undertaking a one-year Masters programme will only be considered in exceptional circumstances.

International students should refer to the International Student Support team before completing an application.

Crisis Loans

Cash loans of up to £250 available from the Financial Aid Team, Level 2 Fraser Building, 2-4pm Monday-Friday.

Loans are available to cover one-off unexpected hardship e.g. excessive bill, delayed/reduced payment from employment etc.

No interest charged.

Full information on eligibility and application processes is available via the hyperlinks above. If you have any questions regarding any of the funds please contact the Financial Aid Team – reg.finaid@admin.gla.ac.uk