University of Surrey

Department of Computing

Faculty of Engineering and Physical Sciences

MSc in Internet Computing

Programme Handbook

2008-2009

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CONTENTS

1. INTRODUCTION

The staff of the Department of Computing ('the Department') welcome you to the University and wish you well in your degree studies here. The Department forms part of the Faculty of Engineering and Physical Sciences ('the Faculty').

Most members of the teaching staff in the Department are nationally or internationally known researchers in their particular fields of computing. Also, we have excellent research links with other departments in the University and with outside organisations and firms. We believe that this expertise in, and enthusiasm for our subjects, is of great benefit in our teaching. There is a friendly atmosphere in the Department and a genuine willingness, however busy we are, to help and encourage our students.

This Programme Handbook provides an informal overview of the Department and the MSc in Internet Computing programme. It contains advice and attempts to answer questions that are frequently asked by students. It also spells out what we expect from our students and what students can expect from us. The purpose of the handbook is to help you to understand the system here - it has no force of law. The official rules, such as programme regulations are contained herein but, as with most rules, the wording of them may not be exactly user friendly, particularly for new students.

Every effort has been made to ensure the accuracy of the information in this handbook at the time of your arrival. However, changes will almost certainly be made during your time at University. For example, new modules may become available, members of staff may change administrative duties or important facilities may be moved to different rooms. Hence this handbook may need to be updated as time goes on.

If you have any comments about this handbook - good or bad, then please inform the MSc Programme Director.

We wish you a happy and successful time with us at Surrey (University of Surrey).

2. PROGRAMME CALENDAR 2008-2009

Autumn Semester

1	**Sept**	**8-12**	
2	**Sept**	**15-19**	Induction Week
3	**Sept**	**22-26**	MSc Teaching starts this week
4	**Oct**	**29-3**	
5	**Oct**	**6-10**	
6	**Oct**	**13-17**	
7	**Oct**	**20-24**	Pre-selections of dissertations completed-interviews with Supervisors
8	**Oct**	**27-31**	
9	**Nov**	**3-7**	Dissertation choice made by now and notified (approx.)
10	**Nov**	**10-14**	
11	**Nov**	**17-21**	
12	**Nov**	**24-28**	
13	**Dec**	**1-5**	Revision classes
14	**Dec**	**8-12**	Examinations held this week, Dissertation Supervision Form submission
15	**Dec**	**15-19**	Examinations held this week

Spring Semester

1	**Jan**	**19-23**	MSc Teaching starts
2	**Jan**	**26-30**	
3	**Feb**	**2-6**	
4	**Feb**	**9-13**	
5	**Feb**	**16-20**	
6	**Feb**	**23-27**	
7	**Mar**	**2-6**	Poster Presentation
8	**Mar**	**9-13**	
9	**Mar**	**16-20**	
10	**Mar**	**23-27**	End of first part of Spring Semester
Vac	**Apr**	**30-3**	
Vac	**Apr**	**6-10**	
Vac	**Apr**	**13-17**	
Vac	**Apr**	**20-24**	
11	**May**	**27-1**	Examinations held this week
12	**May**	**4-8**	Examinations held this week
13	**May**	**11-15**	Examinations held this week
14	**May**	**18-22**	Examinations held this week
15	**May**	**25-29**	Examinations held this week

Summer Period

June	**1**	Full Time work on MSc Dissertation
Aug	**3**	Submission of MSc Reports
Aug	**4-21**	MSc Presentation –VIVA

Note that although semesters and vacations are shown, your MSc programme is full-time 12 months course and you should plan on being at the University for most of this period. The University is formally closed for short periods at Christmas and Easter, but is open at all other times.

3. INFORMATIONS

3.1 Personal Details

At the start of the academic year you will be issued with a form for you to give your local phone number, address and the name and address of your next of kin. Please ensure that your completed form is returned as soon as possible via the **MSc Post-box** (located outside the Postgraduate Taught Support Office in 04AA02). **If your personal details change during the year, it is most important that you inform the MSc Programmes Administrator as soon as you possibly can, so that information we send you about your course does not go to the incorrect address.**

Your name
Your 'personal name' is also called your 'first name' or 'Christian name'.
Your 'family name' is also called your 'last name' or 'surname'.
Your personal name(s) are often replaced by just the initial letter(s).

In relation to University matters, please use the following order for names:
give your personal name(s) ***first*** and your family name ***last***.

If any possibility exists that confusion may arise (e.g. with names in Chinese or other languages where convention puts the family name first), please underline your family name or write it in CAPITAL LETTERS.

3.2 URN (University Registration Number)

To use any University facility you will need a Student Card coded with your University Registration Number (URN). If you did not receive a registration form before the induction, go to the Registry Student Centre, University Hall Undercroft., and register. They will give you the required paperwork to take to the library, who provide you with a Card.

3.3 Full-time Study

Most students on the MSc programmes are studying full time. So we expect them **NOT** to be in time-consuming employment elsewhere.

The university expects an average of **40 hours** per week, for at least **45 weeks**, to be spent actually doing academic work on these programmes. Workloads are planned on this basis. Note that this weekly workload is an average: higher peak workloads will occur!

In addition to this, we also expect full attendance of lectures as these are vital for your understanding of the course. Lectures will take up at least 2 full days a week.

Annual Leave – Students are expected to be available at the University until the end of their course, 4th September 2009. Holiday's may be taken during the Christmas and Easter closure periods, but the Faculty reserves the right to schedule MSc events during these periods. In particular students must be available during the MSc Interim viva and MSc Final viva examination period.

3.4 Staff/Student Communications

Faculty Postgraduate Teaching Support Office (PTSO) Room 04AA02
The PTSO deals with all routine queries from students, especially at the start of the academic year. But, after the first few weeks, when you have all settled in, access for students may need to be restricted – the hours will be made known to you by email.

E-mail (MAIN METHOD)
We will use e-mail for regular communications to students, so please check your email daily. It is very important that you check the notice boards, your pigeon hole and your email regularly.

MSc Notice Board
A notice board for all MSc programmes is in the corridor outside the PGTSO in AA02

Pigeon-holes
MSc pigeon-holes are installed in the Student Common Room (06AA02) - please check them regularly.

Submission Box
There is an MSc letter box on the wall outside the PGTSO (04AA02). You should use this to post assignment and laboratory work to the Office. It is cleared daily.

3.5 Coursework Submission Procedure

The Coursework submission procedure will be announced by each individual lecturer during a lecture period. Coursework to be submitted via the Office should be posted in the Postgraduate Post-box outside the PGTSO (04AA02). It should have the following information clearly written on the front cover provided as a cover page:

Module Title:	e.g *Object Orientated Design & C++*
Module Code:	e.g *EE3.ood*
Student Name:	e.g *Nigel Simpson*
Email Address:	e.g *eem1ns*
Date:	e.g *1 October 2008*
Submitted for the Attention of:	e.g *Dr R Bowden*

I confirm that the work submitted is all my own work *…….student signature*

It is preferable that coursework should be stapled at the top left hand corner only, but if too thick for stapling, it must be bound in a suitable format. **If your coursework falls apart, and some pages are lost, you may not get all the marks you deserve.**

3.6 The Penalty for Late Submission

The late submission of an assignment or piece of coursework will lead to the reduction of the original mark by **7% for each of the first 5 days late, and 0 marks after that**. Since extending a deadline over a weekend may be very beneficial to a candidate, days will be counted to **include weekends and Bank Holidays**.

Module Organisers must specify each assessment deadline, to include the latest acceptable date and time of submission. Work should be put into the Postgraduate Post Box in the Student Common Room, which is emptied every day by the staff in the PGTSO, before being passed to the relevant examiner for marking. The examiner will then calculate the applicable penalty. Any subsequent mark-sheet will be annotated with the penalty, for record keeping purposes (e.g. in the case of appeal).

Students who wish to avoid a penalty in the case of illness or another good cause must provide comprehensive official documentation, medical or otherwise, within one week of the illness. Such dispensation must also be recorded on the mark-sheet.

3.7 Return of Coursework / Assignments

Any coursework or assignments which are returned to you after being marked are required to be kept by you in electronic format, until after the Final Examiners Meeting has taken place in September.

Please note that the department has special software tools to automatically detect plagiarism, and should a piece of coursework or assignment be suspected of plagiarism, the department may require you to submit an electronic version of your work.

3.8 Contacting Members of Staff

Members of staff are generally very happy to see students to help out with problems, etc. However, all lecturers have many duties and responsibilities in addition to their teaching activities. If you need to contact a member of staff and he/she is not in, or is unavailable, then leave a message via the Postgraduate Post box or use e-mail to sort out a more convenient time. All members of staff use a 'Student Office Hours' system that indicates when they are available for consultation without an appointment. These hours are posted on individual academics' doors.

3.9 The University Student Handbook

The University Student Handbook, which should have been sent to you with your joining instructions, contains general information about different aspects of life as a postgraduate student at the University. As well as containing useful advice, the Handbook supplies the names and telephone numbers of those people who can help you further.

4. MEMBERS OF STAFF IN THE DEPARTMENT

Members of staff of the Department have offices on the 2nd floor of BB building.
Appendix B is a list of members of staff with administrative responsibilities that are particularly relevant to students. In your Induction Programme Welcome Pack, you will be given a list of members of staff in the Department, their room numbers, telephone extensions and e-mail addresses.

4.1 Personal Tutors

Every student is allocated a Personal tutor who is a member of the teaching staff. Personal tutors are members of the Department. You will first meet your Personal tutor during your Induction Programme at the start of your first semester. Your Personal tutor is there to help you with any problems or questions you may have concerning the MSc programme, or with matters of a personal nature.

Personal tutors have an open door policy so that you can meet your Personal tutor, as far as possible, whenever you need to. However, to avoid long and frustrating waits in the corridors, tutors have "office hours" during which they do their best to be available to see tutees and other students. It is normally expected that a student will meet with his/her personal tutor at the very least at the beginning and end of each semester to discuss progress, objectives, choice of optional modules, etc. Many students, however, find it of great value to meet with their Personal tutors more frequently than this. Again, tutors are happy to receive messages by e-mail, as this is often the most convenient way of keeping in contact.

4.2 MSc Programme Director

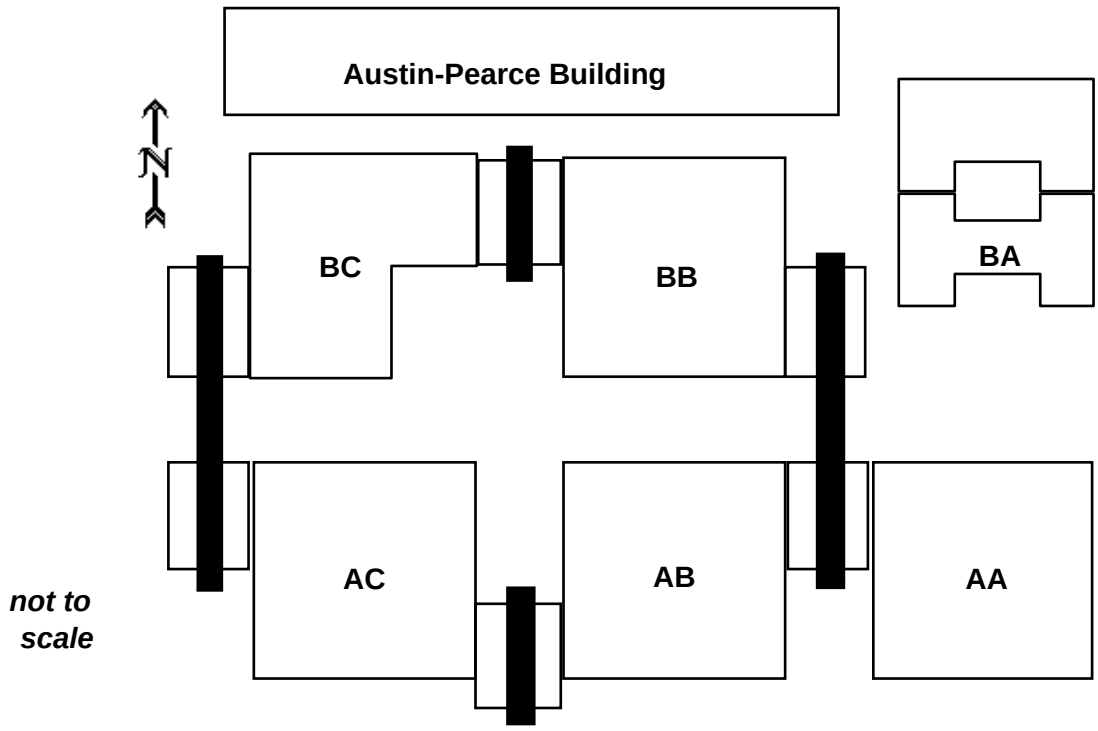
The MSc Programme Director (see Appendix B) has several responsibilities, including promoting the success and development of the programme, liasing with students for feedback on the programme and monitoring the work and attendance of students. The MSc Programme Director is the person to see if you wish to change MSc programme, or if you have questions or comments of a general nature about your degree programme.

4.3 Head of Department

The Head of Department (see Appendix B) has overall responsibility for the running of the Department. He has a very busy schedule and would not normally be the first person to contact for routine matters. However, the Head of Department is the person to whom you should send your medical note if you are ill (see section 9, page 13).

5. FACILITIES IN THE FACULTY

Physical location: where we are



The Faculty occupies several buildings and floors. The Department of Computing is located in BB Building the second floor. The thick black lines are bridges and staircases.

5.1 Student Common Rooms

The Faculty Group Discussion Common Room, Room 06AA02 is on second floor of AA Building. This may be used by any student in the Faculty. The Quiet Common Room, Room 30BB04 is on the forth floor of BB Building. There are facilities for private study, network connection and various vending machines for drinks and snacks in BB04. The MSc Notice Board for your degree programme is situated outside the Postgraduate Taught Support Office on the second floor of AA Building.

5.2 Faculty Postgraduate Taught Support Office (PGTSO)

The PGTSO is located on the second floor of building AA, room 4, and deals with matters to MSc students.

5.3 Faculty Computing Facilities

There are four main computing labs in the Faculty that are for use by students within the Faculty.
They are rooms 32BB03, 34BB03, 34BB04 and 34aBB04 for further information see website
http://www.ee.surrey.ac.uk/SCS/facilities/labs.html
These labs are sometimes booked for classes (timetables are displayed outside the labs), but you may use these labs at other times, they are open 24 hours a day. These facilities are, of course, in addition to the University's central computing facilities.

Room 34BB04 (the Duck lab)

- Open 24 hours a day to students with access to BB building, unless timetabled for classes;
- 16 Dell PC workstations called duck01 to duck16.

Room 34aBB04 (the Swan lab)

- Open 24 hours a day to students with access to BB building, unless timetabled for classes;
- 16 Dell PC workstations called swan01 to swan16;
- HP Laser Printer called hockney.

Room 32BB03 (the Penguin lab)

- Open 24 hours a day to students with access to BB building, unless timetabled for classes;
- 40 Dell PC workstations called penguin01 to penguin40;
- HP Laser Printer called goya.

Room 34BB03 (the Whale lab)

- Open 8.00 am to 8.00 pm unless timetabled for classes;
- 18 Pentium II 333MHz PCs called whale01 to whale18;
- HP Laser Printer called piper.

Room 40AA03 (the Lion lab)

- Open 8.00 am to 6.00 pm;
- 6 x Pentium III 1.2 Ghz PCs>>66.

If you have a computing problem you will need to speak to one of the Computing support staff *(see Appendix B)*. They prefer to be contacted via a 'web request' from the Faculty Computing Services (SCS) web pages at **http://www.ee.surrey.ac.uk/SCS/help** . They provide an efficient service when problems are reported in this way. There is also further information here regarding the Faculty's computing facilities. Alternatively, you can contact them by e-mail at **problems@ee.surrey.ac.uk**. If you need to see a Computing Officer in person, you can do this by visiting the Faculty Computing Office in 26BB03; office hours are from Monday-Friday 09.00 – 17.00.

Postgraduate are entitled to print up to 500 pages per academic year, free of charge, on the faculty printers. Extra pages above this limit will be charged at £4 per 100 sheets. As the 500 limit is reached students will be warned by email.

5.4 The University Central Computing Facilities

Are provided by IT Services. Services available to you include email, Ulearn, Athens, central filestore and access to the campus network from halls of residence. They also provide various large PC areas, which are available 24 hours a day 7 days a week, with PDc running Windows XP with scanning and CD writing facilities.
IT Services is mainly based in the Austin Pearce Building (AP) but you can also access facilities across campus including the Library. IT Services has a Help Desk in the AP building and the 1st floor of the library (semester only) which provides user-support to all students.

The services offered to students are detailed on the IT Services web site at **http://portal.surrey.ac.uk/itservices** and e-mail contact is available via **student-support@surrey.ac.uk.** The University has invested in an online resource to allow students to develop their IT skills within a number of Microsoft packages including Word, Excel, Access, PowerPoint and Outlook. This material is available to UoS students both on and campus at **http://portal.surrey.ac.uk/itservices/as/training/online/onlineskills**

5.5 **MSc laboratories are** in rooms 10, 11 and 18 on level AB04 (Undergraduate Teaching Labs).

5.6 Access to Buildings

Normal weekday working hours are 07.30 to 19.00 hours. You should have been issued with a library card during registration that will give you access to the buildings. After the first few weeks authority may be given to you to access the computer rooms in the department or the main computer unit after 19.00 hours and at all weekend and holiday periods, please ask at the Faculty Reception (02BB04).

6. FACILITIES IN THE UNIVERSITY

6.1 University Central Computing Facilities

The University's central computing facilities are located on the ground floor of the Austin Pearce (AP) Building and are referred to as 'Computing Services'.

There is a Help Desk to provide user support as well as a number of large computing laboratories with PCs running NT operating systems. The services offered to students are detailed on the Computing Services web site at: http://www.surrey.ac.uk/ComputingServices/
and e-mail contact is available via **student-support@surrey.ac.uk**

6.2 Lecture Rooms

Lectures may be given in many different rooms spread across the campus. The following are just some of the abbreviations used for the various buildings:

- **TB** = Teaching Block
- **LT** = Lecture Theatre
- **AP** = Austin Pearce
- **DK** = Duke of Kent
- **32AA03** = Room 32, third floor of Building AA.

6.3 University Library (George Edwards Library)

The University Library has valuable resources, often under-utilised by students. You can request material that it does not have in stock using the interlibrary loan service. The Library web pages provide links to a wide range of electronic information sources including online databases (for literature searching), over 4,000 full text electronic journals and 100s of electronic books. The liaison librarian, Mr Colin Smith, will give you a talk about the library and its services during Induction week. You can contact Colin for help at any time during your course.

Copyright

All students need to be aware of the main points of copyright law and the provisions of the new blanket licence held by the University with the Copyright Licensing Agency. Further information is available at http://www.surrey.ac.uk/Library/copyright.shtml and in paper form in Library Help Leaflet no. 15.

Special Needs Support

In collaboration with Additional Learning Support, the Library provides a range of services to support students with special needs. These range from longer loan periods for books to book fetching and photocopying services. Access to these services is based on the advice of Additional Learning Support staff. Specialised equipment is available in the Library to enhance the viewing of printed and online text.

If you feel that your needs are not being met by these services, please contact Additional Learning Support or your Liaison Librarian.

6.4 English Language Centre - LC

All students whose first language is not English will be required to take a short English test organised by the Department of Languages & Translation Studies (LTS) when they first arrive. This test is compulsory to all new overseas students. Please note that this is a 'diagnostic' test and not a pass / fail test. Hence, it helps LTS determine what additional English classes, if any, you will be required to attend during the Autumn and/or Spring semesters to improve your English. These classes can significantly help you to pass the programme, particularly when writing up your dissertation, and can also be helpful when finding a job at the end. **Classes are FREE – so take advantage of them. For more information about this consult the LTS website at www.surrey.ac.uk/languages/English/in.html**

The Department will not be sympathetic to students who lose marks due to their report writing skills if they have not attended the English Classes that have been recommended to them.

6.5 Languages for ALL (LfA)

The Department of Languages & Translation Studies (LTS) is a specialised language-teaching department which offers courses across the University. Through the Department's "Languages for All" courses you may study a foreign language, regardless of your main subject. You can start a new language, brush up on a half-forgotten one, or continue a language you have previously learned. Studying a language at Surrey is particularly important if you opt to work abroad after you graduate.

The University of Surrey Certificate in Foreign Language Proficiency will be available free of charge, to all students at the appropriate level. The Certificate will be awarded on the basis of attendance, coursework and an end-of-course test.

Further information and registration details can be found at:
http://www.surrey.ac.uk/languages/foreign-languages.htm

6.6 Membership of Student Union (SU)

All students are required to enrol as student members of the University Students Union. Payment of the fee, which is included in the composition fee, entitles students to membership of all Clubs and Societies affiliated to the Student's Union and other privileges as laid down in the Union Rules. Details of the various services offered by the SU will be included in the 'Welcome Pack' issued with the Student Induction Packs.

6.7 Online Learning

The University has invested in an online resource to allow students to develop their IT skills with a number of Microsoft packages including Word, Excel, Access, PowerPoint, Outlook and Internet Explorer. This material is available to Students both on and off the campus at:
http://www.surrey.ac.uk/ComputingServices/as/cbt/

7. HEALTH & SAFETY

The Faculty endeavours to provide its Staff and students with a healthy and safe working environment. Full details are given during your Induction Programme and a copy of the Faculty's Health and Safety Policy is displayed on the Health and Safety Notice board. *(Please also refer to the University's Postgraduate Student Handbook for the University's Statement of Health and Safety Policy).*

The Faculty Health & Safety Advisor should be the first point of contact on any Health and Safety matter. Details of First Aiders and Evacuation Officers are displayed on the Health and Safety Notice board and the Faculty Safety Policy is available at: **http://www.eps.surrey.ac.uk/HAS/**

Food and Drink should **not** be taken into any teaching room, or taken near to any computing equipment.

Note that smoking is **not** permitted in Academic Buildings.

8. SPECIAL NEEDS

Faculty Special Needs Representative- To be confirmed
Postgraduate Special Needs Administrator- Miss Klára Krčová

If you have any special needs (e.g. if you are partially sighted or are dyslexic) then in order for you to make the best academic progress you can, it is important that we know about them. For any student wishing to disclose a special need, a form will need to be completed at the start of your MSc programme. A copy of the '**Disclosure of Disability Referral form**' can be found in your Induction Pack.

Additional Learning Support and Special Examination Arrangements

Additional Learning Support (ALS) provides a wide range of support for students with disabilities and specific learning difficulties (including dyslexia). The office is located on the 4th floor of the Library and houses the Technology Centre with specialist software and equipment. Contact Janet Britton or Robert Fidler on 01483 689609 or als@surrey.ac.uk.

To apply for special examination arrangements, you will need to make contact with ALS at the earliest opportunity following your arrival at the University. **In any event you must contact ALS within the first 6 weeks of the autumn semester**. Delays in formally reporting your circumstances may result in there being insufficient time to put the necessary arrangements in place, particularly for programmes with examinations in the first semester. Please bring to ALS your medical evidence or dyslexia assessment.

If your dyslexia assessment was completed before you were 16 years of age you will need a further 'performance of attainment' assessment to qualify for special examination arrangements or the Disabled Students Allowance (DSA).

Deadlines for applications to special examination arrangements, for those already holding the required evidence are: **17th October 2008** for the autumn semester examinations and **27th February 2009** for late applications and the summer examinations. You need only apply once for all subsequent examinations unless your needs change.

Further information on Special Needs is available via the Additional Learning Support web-site: http://lib1web.lib.surrey.ac.uk/ALS/

Dyslexic and disabled students
If you think this may apply to you, read on…

8.1 Special Needs Arrangements

University

General approach

Many students at the University of Surrey have a special need. The University has comprehensive policies on Disabilities, Special Needs (including Dyslexia) and Equal Opportunities. These policies reflect the requirements of both best practice and the law.*1*

Additional Learning Support

The University has a group called Additional Learning Support, separate from Faculties, which is part of the Library (fourth floor or ask at the Library Information Desk). Additional Learning Support (ALS) provides a wide range of support for students with disabilities, and specific learning difficulties including dyslexia. This can include help with applying to your Local Education Authority for a Disabled Student's Allowance. The ALS office also houses the Assistive Technology Centre with specialist software and equipment.

Faculty

The Faculty has a Special Needs Representative and a Postgraduate Special Needs Officer. Either of these may be consulted if you think you may have, or know you have, a special educational need or disability. Alternatively, you can talk to your personal tutor, or our Director of Postgraduate Studies.

What to do

Students who require extra support during their courses should make their situations known to the Faculty (see table of contacts below) or to ALS (if there are issues of confidentiality you are concerned about, you are advised to approach ALS first).
For ALS, please make an appointment by sending an e-mail to als@surrey.ac.uk, or phoning extension 9609 (01483-689609 from outside the University).

Contacts re Special Needs

Name	Role	Extension	E-mail address	Room
NEW	Faculty Special Needs Representative	TBC	To be confirmed	TBC
Klara Krcova	Postgraduate Special Needs Administrator	6050	K.Krcova@surrey.ac.uk	04AA02
ALS	Additional Learning Support	9609	als@surrey.ac.uk	8LB04

You can find these policies on the University website, www.surrey.ac.uk, by following the link for Current Students, and then 'Additional Learning Support'

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1 You can find these policies on the University website, www.surrey.ac.uk, by following the link for Current Students, and then 'Support, Health & Wellbeing' – Help for Dyslexic & Disabled Students

9. THE STUDENT VOICE

Getting feedback and suggestions from students on academic and other issues is important for the Department. Feedback from students about modules or the programme of study forms an important part of the academic review process. Questionnaires are regularly used for this purpose.

Suggestions and Problems

Depending on their nature, suggestions and problems should be raised directly with the lecturer concerned, or your Personal Tutor in the first instance, the MSc Programmes Officer, and the Director of Postgraduate Studies (Dr. Nick Antonopoulos) should be informed if the matter is unresolved. The Staff-Student Liaison Committee (SSLC) is also the appropriate forum to raise any general teaching related issues. The PGTS Office will usually be able to advice on the best method and/or the best person to approach.

Low-level approaches of this kind solve many problems. But, if needed, there are a series of steps beyond this that the student with a grievance can take, and the Postgraduate Teaching Support Office and/or the Students Union will be able to provide information about these.

Students who feel that something has gone seriously wrong in the examination process may appeal informally to the Director of Postgraduate Studies or to the MSc Examinations Officer (Dr. André Gruning), who will be able to repeat checks that the 'mechanics' of the process (e.g. marks addition) has been carried out correctly.

We aim to be accurate and wholly fair in our marking of examinations and coursework, and in getting the correct marks entered into our data bases. We have a sophisticated checking system which has been enhanced in recent years and it is very unlikely that errors such as addition of marks or, parts of a script left unmarked, are found. We feel therefore that further simple checks in addition to these are no longer of value to students. Despite this, from time to time students believe a particular module has been incorrectly marked. We do not wish to discourage appeals where a student has serious concerns regarding the marking of their paper or a piece of coursework. However to discourage frivolous appeals we impose a fully costed fee to cover the extra administrative and academic costs involved. This will be refunded in full if the appeal is successful. The fee is £25 per paper or piece of coursework. A piece of coursework is defined as representing one component (unit) of assessment (as specified in the module description). The fee, an increase on previous years, now includes a full check of the original marking of the paper/coursework by the academic examiner, hence involving more time and effort.

The procedure for getting a paper or coursework checked is:

(1) Fill in a form which is available from the Postgraduate Teaching Support Office, pay the necessary fee in the Faculty Finance Office and obtain a receipt which you hand back to the MSc Programmes Officer. Once this is done a recheck can go ahead.
(2) You will be informed of the result of the recheck in writing.
(3) If there has been an error in the original mark, either higher or lower, this will be substituted and you will be given a new transcript.

Important notes:

(1) If you believe there is an irregularity in the marking of a paper you must raise the matter at the earliest opportunity, but within one month of the publication of results.
(2) The recheck procedure cannot be used to try to push marks up slightly on each module. A change to a mark will only be made if a significant error is detected and only with the approval of the Chair of the Exam Board.

Beyond this, there is the possibility of a formal appeal to the University. The University General Regulations state the procedure for this; however, the grounds for a successful appeal have to be one of the very specific ones mentioned in the Regulations.

MSc Staff-Student Liaison Committee (SSLC)

The MSc Staff-Student Liaison Committee exists for the purpose of obtaining feedback from students on any aspects of the MSc programmes, so that improvements can be discussed and potential problems could be avoided.

The SSLC consists of a few student representatives, the MSc Programmes Administrator and is chaired by (Dr. Nick Antonopoulos). The student SSLC members are also PGBoS (PG Board of Studies) members and are expected to attend the PGBoS meetings held approximately twice a semester.

SSLC student members are selected from defined groups, and should aim to represent the collective views of students within their group. The student representatives are theoretically chosen from among the variety of courses but due to the relatively short length of study, in practice, there tend to be only a few active volunteers who come forward. The committee meetings take place twice each semester over lunch and they discuss problems that may be affecting the students. All students are expected to raise any issues they have via their SSLC representatives.

10. WHAT TO DO ABOUT ACADEMIC WORK IF YOU ARE ILL

Minor illnesses - no visit to the Health Centre or doctor

If you miss a deadline for a compulsory part of the course, such as a laboratory session or coursework, through some minor illness, you must complete a 'Student Self-Certification Absence through Illness' form, available from the General Office (02BB04). The general rule is:

missed work + no medical note = a mark of zero

and a few marks of zero can badly affect your total for the year and your chances of passing. As soon as you are fit, you should talk to the lecturer in charge of the missed work - it may be possible to negotiate an extra lab slot or an alternative piece of work through them. Your chances of a successful negotiation are greatly improved if you have the courtesy to let the lecturer know at the time of your illness. For all project submissions advice must be sought from the MSc Course Director.

Illnesses requiring medical treatment from the Health Centre or your doctor:

If you think you need it, get medical assistance without delay.

Make sure the Department is informed as soon as possible afterwards, rather than weeks later, or - worse still - waiting until after the exams.

Although it is important that the Faculty knows you will be absent because of illness, you have the right to say who is to know about the nature of your illness.

The normal procedure is for you to ask the Health Centre or your own doctor to write to the Director of Postgraduate Studies with details, implications of the illness and dates. The Director of Postgraduate Studies will normally pass the detailed information to the Postgraduate Teaching Support Office and (if there are health and safety implications) to the Departmental Safety Officer. Where necessary, other staff will be told that you are absent through illness without going into details.

If there is a reason why you wish details to be restricted to the Director of Postgraduate Studies alone then you must insist that your medical note is clearly labelled:

Confidential to Director of Postgraduate Studies ***alone.***

In the same way if you wish details to be restricted to some other member of staff alone, you must insist that your medical note is clearly labelled

Confidential to .....alone.

Unless you choose to make these restrictions the normal procedure will be followed.

It is difficult to generalise about how cases of illness are treated, as far as your studies are concerned, but we try to be sympathetic and fair. In some cases you might be given the opportunity to catch up on coursework, in others you might be excused pieces of work. You should discuss this with the Director of Postgraduate Studies once you are fit enough to return.

When illness occurs in the period leading up to (or during) examinations, you might be excused an exam or have your illness taken into account. This will be decided after the examinations, at a meeting of the Board of Examiners. A small medical panel is set up to look more carefully at these specific cases.

The medical panel will outline to the Board of Examiners how much your capacity to study has been affected, but without disclosing your full medical details to the whole Examiners' Meeting.

11. PROBLEMS? WHO SHOULD I CONTACT?

If you have a problem, personal or academic, or if you are unhappy about any aspect of your programme of study, then it is usually better to talk to someone about it than not.

Do not suffer in silence!

Your first point of contact will normally be your Personal tutor. He or she may not have all the answers but will often be able to help - either directly, or by referring you to a person better able to try and sort out the difficulty.

If your Personal tutor is unavailable, then the MSc Programme Director (see Appendix B) is a natural second choice.

Students who feel that something has gone seriously wrong in the examination process may appeal informally to the MSc Programme Director and Chair of MSc Exams Board, Dr. Nick Antonopoulos; or to the Examinations Officer (Dr. André Gruning).

Low-level approaches of this kind solve many problems. Beyond this, there is the possibility of a formal appeal to the University. The University General Regulations state the procedure for this; however, the grounds for a successful appeal have to be one of the very specific ones mentioned in the Regulations. The Faculty Postgraduate Office and/or the Students Union will be able to provide information about these.

For further information on complaints and grievance procedures, go to
http://portal.surrey.ac.uk:7778/portal/page?_pageid=719,64801&_dad=portal&_schema=PORTAL

SO THE MESSAGE IS:

IF YOU HAVE A PROBLEM, TALK TO YOUR PERSONAL TUTOR ABOUT IT SOONER RATHER THAN LATER.

12. PROGRAMME INFORMATION

12.1 Awards

The programme is a full-time modular programme in Internet Computing with two tiers of award:

- Master of Science in Internet Computing *(180 credits)*
- Postgraduate Diploma in Internet Computing *(120 credits)*

12.2 Certification

Dates of Programme & Certificate of Attendance

Full-time students are required to be present within the University from 18 September 2008 through to 31 August 2009. The Postgraduate Registry will issue a certificate to this effect if needed.

Degree/Diploma Certificate

Officially, no award is made to you until it has been ratified by the University Federal Senate: – the Board of Examiners merely *recommends* that the award be made to you. The official Degree/Diploma certificate is sent to you after the Student Progress & Assessment Board (SPAB) has met and the Federal Senate has approved the award. The Department will issue a letter/final transcript shortly after the Final Examiners' Meeting stating that you have been recommended for an MSc degree or otherwise. This letter is generally acceptable to most employers, national authorities, etc.

Transcripts

A transcript will be issued as the end of the academic year showing the modules you have taken, and the credits and marks received, including the Dissertation module, if appropriate. Interim transcripts will be issued at the end of each semester.

Other Documentation

In many countries, e.g. Greece, Portugal, you may require detailed syllabi, etc, of the various modules you attended. **You are thus advised to keep this Handbook for any such future needs.** The office does not necessarily keep spare copies of Programme Handbooks from earlier years, and if these are needed, a **CHARGE will be made for their supply.**

13. THE PROGRAMME

13.1 Statement of Primary Aims and Objectives

Internet Computing (IS) increase productivity, improve decision making and lead to competitive advantage. The MSc in Internet Computing programme will equip you with skills and methods to manage information technology within business organisations. This programme blends recent advances in IT – the Internet, web technologies – with business applications. The programme aims to develop IS professionals who will gain knowledge of Internet Computing design techniques, strategic business disciplines, web technologies and e-business, and who will be equipped with up-to-date techniques of developing IT infrastructure for organisations. The programme has been created for people who will assume responsibility for the planning, the design and the implementation of Internet Computing. It is designed for anyone who is, or aspires to be systems analysts, IS project managers and IS consultants.

13.2 Programme Structure

The programme consists of a number of modules, each focusing on an aspect of the planning or design of Internet Computing. Compulsory modules cover the systems development life-cycle, security, XML and other web-based formats, and management. There is a rich variety of optional modules from intelligent computing to internationalising software and human computer interaction. Students who successfully complete eight modules will be awarded a Postgraduate Diploma in Internet Computing. Students who wish to be awarded an MSc in Internet Computing must, in addition to the eight modules, prepare and successfully defend a written dissertation.

The **academic year** is a 12-month period from September to August, and is divided into two semesters and a summer dissertation. A **semester** is a 15-week working period during which teaching and assessment take place. University of Surrey has a continuous Autumn semester from September to shortly before Christmas. There is then a Spring semester that runs from January to May: it has ten weeks before a long Easter break, and five weeks afterwards. Examinations take place at the end of each semester.

The School operates under the University's credit-based modular system, in which one credit represents approximately 10 hours of student academic work, and each **module** is allocated a credit rating that represents both relative workload and the relative contribution that the marks from that module make towards the final award. This programme involves study of eight 15-credit modules and a 60-credit Dissertation module.

13.3 Programme Schedule

The programme will be taught over two semesters of the year, Autumn and Spring with the Dissertation, if appropriate, to be prepared over the Summer. The module description for each module is detailed in Appendix A. Your programme will consist of four compulsory modules in the Autumn Semester and four more modules in the Spring Semester; one of which are compulsory. You will be asked to select three options in the Spring Semester.

In the **Autumn 2008 Semester** you will take **four compulsory modules** (60 credits):

- COMM006 Challenges for Computing Professionals *(15 credits)*
- COMM007 Network Technologies *(15 credits)*
- COMM024 Computer Security *(15 credits)*
- COMM030 Enterprise Systems Development *(15 credits)*

= TOTAL 60 credits

In the **Spring 2008 Semester** you will take four further modules (another 60 credits)

The **compulsory module** will be:

- COMM011 Peer-to-Peer Computing *(15 credits)*

You will be asked to select **three optional modules** from:

- COMM010 Intelligent Information Systems *(15 credits)*
- COMM012 Security & Cryptography *(15 credits)*
- COMM013 Component Based Software Engineering *(15 credits)*
- COMM014 Visual Information Systems *(15 credits)*
- COMM015 Bioinformatics *(15 credits)*
- COMM021 Mainframe Computing *(15 credits)*

= TOTAL 120 credits: PG Diploma

During the summer:

The Dissertation *(60 credits)*

= TOTAL 180 credits: MSc

Autumn Semester 2008 Timetable: A copy of the Autumn Semester Timetable will be found in your Induction Pack. Teaching commences from *Monday 22September 2008.* The timetable for each semester is subject to change. You will be notified of changes as and when they occur.

14. LECTURE NOTES

Tutors adopt different procedures for the distribution of notes.

Some prefer to distribute them in sections as the topics are reached during the module – in this case the tutor will distribute them during a lecture. If you did not receive a copy please contact the tutor directly. Other tutors do not distribute notes – but place their lecture transparencies and other useful material on the web. Module related material can be found at the following website:

http://www.cs.surrey.ac.uk/teaching/pg.php

15. ASSESSMENT PROCEDURES

Assessment description and justification

The assessment strategy aims to demonstrate the level of understanding achieved by the students for each individual module. The assessment for each module differs in order to reflect the nature of the material in each module. The forms of assessment include examination, research paper, case study, essays, presentation, and software development. The syllabus for each module describes the exact nature of assessment.

The purpose of each assessment is three-fold. First it allows each student to determine how well he/she has understood the concepts and techniques taught in the module. Secondly, it allows the instructors to evaluate the progress of each student and the adequacy of their instruction. Thirdly, it provides the evidence to support the award of a Postgraduate Diploma or a full Masters degree.

The assessment of the Autumn semester modules is generally based on a 60% written examination at the end of the semester, and one or more pieces of coursework providing the remaining 40% of total marks for each module; the exception is the module *'Information Systems Development'*. The ratio of coursework/examinations fairly reflects one of the main aims of this

MSc degree which is to transfer necessary professional skills to students in the broad area of Internet Computing.

The Spring semester modules are strongly related to the research interests of the academic members of the department. The delivery of most of these modules is research-oriented, comprising seminars, discussions and tutorials.

Evaluation of Assessment

Lecturers will comment on all pieces of assessment and provide a mark. All students' work has to represent their own ideas and efforts. Students will be marked down for using others' work without attribution. Students who submit work which has substantial parts which are not their own original work should expect to fail the assessment. *Please refer to Appendix C on 'Academic Misconduct and Plagiarism', page 75.*

Lecturers will provide guidelines for the preparation and presentation of each assignment at the time the work is set.

Deadlines for Assessment

There will be a specific deadline for each piece of coursework set. In order to ensure fairness and comparability between students and to make possible consistent feedback, students must submit their coursework on time.

It is the policy that late assignments will be read and will receive comments, but the student will receive no credit for late work. This may result in a student failing a module.

The module convenor may extend the deadline for an assessment only in the case of illness or other serious emergency. Students should request an extension in writing, and make every attempt to do so before the deadline. Students should submit documentary evidence (such as a medical note) with the request.

16. EXAMINATIONS

Please refer to your University Student Handbook for the Regulations on Examinations and Other Forms of Assessment – i.e. the *Instructions to Examination Candidates*.

16.1 Timetable of Exams

The Faculty is restricted by the University as to when it may hold exams – the central University authorities are also the ultimate decider of the exam timetable, though we do make recommendations.

The large number of modules means that some exams may be on successive days, and although legally allowed, we have so far managed to avoid two exams on the same day. The University also reserves the right to schedule exams on Saturdays and after 1730 hours if necessary.

Timetabling of exams is generally such that large classes are examined earlier than smaller classes, so that marks are available in time for the Examiners' meeting.

16.2 Use of Calculators

Increasingly, modern calculators are able to store complex programs and large amounts of data. Concern has been expressed, by both staff and students that use of a powerful calculator might give a student an unfair advantage in examinations. Moreover, it would be difficult to detect cheating by illicitly storing information in a calculator. Therefore, to ensure fairness, the University has approved only certain calculators which may be used in examinations.

The only calculators that are permitted are: Casio FX115m, FX115s or FX115w.

16.3 Mitigating Circumstances in Examinations and Coursework

The University Regulations allow Boards of Examiners to consider genuine and verifiable extenuating or mitigating circumstances, which may have prevented a student from attending an examination, submitting a

piece of coursework or assignment by the due deadline or which may have affected their performance in that assessment.

In the interests of common understanding, the University has drawn up notes of guidance for students on the principles which underpin its consideration of mitigating circumstances, what it regards as acceptable mitigating circumstances and the sort of supporting evidence that Boards of Examiners will consider acceptable. These notes of guidance are available on the University's Calendar or on the web pages at:

http://portal.surrey.ac.uk/pls/portal/docs/PAGE/REGISTRY/EXAMS1/EXAMQUERIES/MITIGATINGCIRCS.DOC .

You should also refer to the guidance provided by the University's Health Centre on what it will and will not provide in the way of medical certification, at: http://www.unishealth.nhs.uk/

16.4 Re-sitting Examinations/Dissertation Re-examination

A flat fee of £1.50 per credit is charged for re-sitting an examination of a taught module. **NOTE: This fee does not entitle attendance at any lecture.**

The fee for re-examination of a dissertation is £60.

A late entry fee of £25 may be charged if submission is past the required date.

17. PERSONAL DEVELOPMENT PLANNING

Whilst studying at the University you are encouraged to undertake activities outside of your formal modules to help develop skills and knowledge that you would like to improve. This development, known as Personal Development Planning (PDP), is an initiative supported directly through your degree course, as well as through supplementary resources and courses provided by the University. By making the most of the resources available whilst you are here, you can improve a range of skills that will support your lifelong learning and help you to stand out from the crowd when applying for jobs.

Activities that relate to your development are available through a wide variety of sources. These include the modules you study, your personal tutor, the library, the student zone on the University web site http://portal.surrey.ac.uk/skills/students, the Student Union (including the DAVE project) and the careers department.

During the first semester, timetabled sessions will be used to help you with specific topics related to your academic development. You will also be supplied with a small logbook that will help you to plan areas that you think you need to spend time on whilst at University.

Thinking about your development will help you to achieve what you want here and in your future career. For example, by developing your skills, you will be able to:

1. Identify your preferred learning styles and know how to maximise the approaches that will be most helpful for you.
2. Identify appropriate strategies for study organisation and time management.
3. Make effective use of the Library and other resources.
4. Find out what is available through the University and make appropriate choices about how and when to get involved.
5. Plan ahead and identify the elements necessary to manage projects.
6. Know how to analyse data relevantly.
7. Keep up with changes and new developments both in your own academic sphere and more generally.
8. Demonstrate the ability to work in a team.
9. Understand academic writing: how to plan, structure and complete reports, coursework and examinations to meet University requirements.
10. Develop skills in oral presentation techniques and know how to be appropriately influential.
11. Have a broad understanding of what jobs or careers might interest you.

12. Understand what competencies your preferred employers are looking for and know how to demonstrate strength in relevant areas.

Working on these skills through these and other resources will also help your personal tutor to give you more complete reference when you leave the University.

Further information about this will be provided during your induction programme.

18. GENERAL REGULATIONS FOR HIGHER AWARDS OF THE UNIVERSITY FOR STUDENTS PURSUING PROGRAMMES ON A MODULAR BASIS

General

Programmes to which Regulations Apply

1.1 A modular programme of study is one consisting of individual modules, each complete in itself, which may be combined into a programme leading to an award of the University. Programmes may be studied at the University on a full-time or part-time basis, at other approved centres, or by distance learning, as specified in the Programme Regulations.

1.2 A person who is not a candidate for an award of the University may attend any modules subject to the agreement of the Dean of Faculty, the relevant Programme Regulations and payment of the appropriate fees. Credits may be awarded for modules successfully completed in accordance with these Regulations.

Nature of Award

1.3 Subject to the Programme Regulations, the award at the end of a programme of study may be a Postgraduate Certificate, a Postgraduate Diploma or the Degree of Master of Arts, Master of Business Administration, Master of Laws, Master of Music, Master of Public Administration, Master of Research or Master of Science.

Admission and Registration

Admission

2.1 An applicant holding a Degree of the University of Surrey or a Degree of any other university approved for this purpose, or a Degree awarded by the Council for National Academic Awards, may be admitted to a programme leading to an award of the University. Other applicants may be admitted provided that the Dean of Faculty is satisfied of the applicants' fitness to pursue the programme by virtue of professional or other relevant qualifications and/or experience.

2.2 An applicant may not be admitted to a programme unless the applicant has first been accepted by the Dean of Faculty in which the programme is offered. The admission of an applicant may be subject to conditions specified by the Dean of Faculty. Subject to the Programme Regulations, admission to the full programme may be provisional upon successful completion of certain modules.

2.3 An applicant may be required to satisfy the Dean of Faculty of an ability to understand and communicate in both written and spoken English that is adequate for the purpose of pursuing the programme. Either before or after the start of the programme the Dean of Faculty may require a student to attend a course of instruction in English.

Registration

2.4 A student for an award of the University must register and undertake to comply with the Charter, Statutes, Ordinances and Regulations of the University. Registration for an award shall normally take place at the start of the programme. The name recorded on any transcript or certificate issued by the University shall be the name in which the student was last registered.

2.5 Retrospective registration may be permitted in accordance with the Programme Regulations, provided that the student has not completed more than one-third of the programme. Registration under this provision will be deemed to have commenced from the date of

registration for the award-bearing programme of study.

2.6 A student must re-enrol for the beginning of the Autumn semester for each successive year in which the programme of study is pursued. The registration of a student who fails to re-enrol by the end of the Autumn semester may be deemed to have lapsed. No student is entitled to register or re-enrol unless the prescribed fees have been paid[2].

2.7 Each student must register for individual modules in each semester by the date specified in the Programme Regulations. The date by which the student must register shall be not later than the end of the third week following the commencement of that module. Any revision to a student's module registration beyond the deadline may be made only with the approval of the Faculty[3].

A student may not withdraw registration from a credit-bearing module either:

(a) later than five weeks into the delivery of a module; or

(b) after the student has submitted work for assessment or has presented him or herself for examination:
whichever is the sooner.

Except as may be determined in accordance with Regulations 4.15 and 4.16, a student who does not complete a module for which they are registered shall be deemed to have failed the module.

Subsidiary Award

2.8 When the Programme Regulations state that such awards are offered, a candidate for the Degree of Master shall be deemed to be also a candidate for a Postgraduate Certificate or Postgraduate Diploma and a candidate for a Postgraduate Diploma shall be deemed to be also a candidate for a Postgraduate Certificate.

No student may receive more than one award for a given programme of study. Exceptionally, a student who has received a Postgraduate Certificate or Postgraduate Diploma may re-enrol for the next part of the programme of study but may receive the further award only upon surrendering the first award.

2 Detailed rules concerning payment of fees are given on page C 6.

3 A student who is charged tuition fees on a module by module basis and who withdraws from a module may be liable to pay tuition fees for the module from which he/she has withdrawn, in accordance with the University's fees policy.

Minimum Length of Programme	2.9	Unless the Programme Regulations specify longer periods or a student is exempted from part of a programme in accordance with Regulation 3.6, the minimum period of registration shall be:

Postgraduate Certificate	Three Months
Postgraduate Diploma	Seven Months
Master's Degree	Eleven Months

Maximum Length of Programme	2.10	Subject to the provisions of Regulation 2.11, the maximum period of registration, reckoned from the date of a student's initial registration, shall be:

Postgraduate Certificate	Thirty six Months
Postgraduate Diploma	Forty eight Months
Master's Degree	Seventy two Months

The Student Progress and Assessment Board, on the recommendation of the Dean of Faculty, may extend the maximum period of registration specified above for a given award for an individual student by not more than one year at one time.

2.11 The Programme Regulations for any award may specify a period shorter than the maximum specified in Regulation 2.10. The Dean of Faculty may extend the period of registration for that award for an individual student beyond such time limit specified in Programme Regulations by not more than one year at one time within the maximum limits specified in regulation 2.10.

2.12 The registration of a student who has not qualified for an award in the period specified in accordance with Regulations 2.10 and 2.11, and for whom no extension has been granted, shall be deemed by the Student Progress and Assessment Board to have lapsed. In these circumstances, the student shall be entitled to the highest level subsidiary award available within the Programme, provided the student has satisfied all the requirements for that award.

2.13 A student may transfer registration from one programme of study to another within the University with the approval of the Dean of Faculty concerned. Except as provided by Regulation 2.14, such a student shall be deemed, for the purpose of these regulations, to be following a single overall programme at the University and the credits obtained, or other consequences of the assessment of any modules already undertaken, shall remain unchanged.

Withdrawal 2.14 A student who wishes to withdraw permanently from the University before the normal completion of the programme shall give notice in writing to the Dean of Faculty concerned, who shall inform the Registrar.

A student who has withdrawn permanently, or whose programme has been terminated under any of the following regulations may, with the agreement of the Dean of Faculty concerned:

(i) be re-admitted to a *different* award-bearing programme [4] or

(ii) be re-admitted to the same award-bearing programme, provided at least 24 months shall have elapsed following the withdrawal or the termination. The Student Progress and Assessment Board

[4] The term "different award-bearing programme" shall be understood to mean a programme which has not more than 30 credits per year in core modules in common with the student's original programme.

may, however, reduce this period to 12 months.

In either of the above circumstances, the student shall be regarded as a new entrant and the credits obtained, or other consequences of the assessment of any modules already undertaken, shall not contribute to the programme of study. The student may, however, be considered for exemption from part of the programme at the discretion of the Dean of Faculty in accordance with Regulation 3.6.

Temporary Withdrawal

2.15 A full-time programme of study shall be continuously pursued except that a student may, with the permission of the Dean of Faculty, withdraw registration temporarily from a programme; except with the approval of the Student Progress and Assessment Board, the period of withdrawal shall not exceed one year. When the Programme Regulations indicate that a part-time programme of study shall be continuously pursued this provision shall also apply to a part-time student.

Continuing Status

2.16 A full-time student who has completed at least one year of study may register as a continuing student provided that:

(i) the student has passed the prescribed examinations;

(ii) the student is making use only of the University's general facilities and is no longer deemed to be using facilities of the Faculty such as laboratories or computing facilities;

(iii) the student is no longer in full-time attendance.

Programmes of Study

3.1 The Programme Regulations shall specify the modules which comprise the programme, which, if any, modules are compulsory, the pass mark for a module, the level of each module and its credit value. The normal level of study for postgraduate programmes is M but modules at level HE3 may contribute as follows:

LLM, MA, MBA, MEd, MMus, MRes, MSc, MMath: Minimum of 150 credits at Level M with remainder at Level HE3

Postgraduate Diploma: Minimum of 90 credits at Level with remainder at Level HE3

Postgraduate Certificate: Minimum of 45 at level M, with remainder at level HE3

3.2 The minimum standard credit value of a module at levels 0, HE1, HE2, and HE3 shall be 10 credits. Modules with a credit value which is a multiple of 10 shall be permissible.

The minimum standard credit value of a module at level M shall be 15 credits. Modules with a credit value which are a multiple of 15 shall be permissible.

In cases where modules are delivered over two consecutive semesters, Faculties shall be permitted to offer to students, who are studying for only one of the two semesters, modules whose credit value may be half the value of the full module, recognising that the credit value of such modules may not conform with the minimum standard credit values prescribed above. Such modules shall not be available to students registered for award-bearing programmes.

3.3 Except when the Programme Regulations specify a greater number or except when a student has been exempted from part of a programme in accordance with Regulation 3.7, the minimum number of credits required for an award of the University shall be:

Postgraduate Certificate	60 credits
Postgraduate Diploma	120 credits
Master's Degree	180 credits

3.4 For programmes leading to the award of Master of Arts, Master of Business Administration, Master of Laws, Master of Music, Master of Public Administration or Master of Science, the credit value of the dissertation module shall be specified in the Programme Regulations but, except with the special permission of the Senate, shall be not less than 30 or greater than 90 at level M.

3.5 A programme of study leading to the award of Master of Research shall comprise:

(i) a dissertation, which shall be not less than 90 credits or greater than 150 credits at level M;

(ii) one or more modules on research methods training totalling not less than 30 credits at level M;

(iii) normally not more than 30 credits at level M in discipline-related modules.

The credit values of these components shall be specified in the Programme Regulations.

3.6 A student may register for modules having a total credit value of not more than 225, in any one period of twelve months.

A student who has completed successfully the programme for which he/she is registered and to whom an award is approved by the Board of Examiners may not register for further modules in order to improve the classification or division of that award (see also Regulation 4.4).

Exemption from Part of Programme

3.7 The Dean of Faculty may exempt from part of a programme of study a student who has satisfactorily pursued a previous programme of study of appropriate nature and standard outside or within the University or one of its Associated Institutions[5].

The minimum number of credits which must be obtained within the University or from programmes offered by its Associated Institutions[4], leading to awards of the University, shall be:

Postgraduate Certificate	30 credits
Postgraduate Diploma	60 credits
Master's Degree	90 credits

The marks used to calculate the classification or division of the award shall be those derived from modules undertaken within the University or from programmes offered by its Associated Institutions, unless an arrangement to recognise marks derived from another institution is explicitly stated in a memorandum of Agreement between the University and that institution.

Starting Date

3.8 The programme may begin at any time as may be specified in the Programme Regulations.

3.9 The minimum number of credits for which a student may be granted exemption shall be:

10 for levels 0, HE1, HE2, HE3 and P ; and

[5] See Academic Standards Guidelines on Credit Accumulation and Transfer and AP(E)L. There is no limit on the number of credits and associated marks which may be transferred within the University and its Associated Institutions. Acceptance of such transferred credit and exemption from part(s) of a programme is at the discretion

15 for level M.

Co-operation with other Institutions

3.10 A programme may be pursued partly at the University and partly at another institution or institutions when the arrangements have been approved by the Senate.

Assessment

4.1 To qualify for an award of the University a student must pass the prescribed assessment and fulfil such other requirements as may be specified in the Programme Regulations.

Module Pass Mark

4.2 The pass mark for the assessment of a level M module, including the dissertation module shall be 50%. The pass mark for a level three module taken as part of a level M programme shall be 40%.

The Programme Regulations may specify that a student who has not obtained an average mark of at least 50% at an intermediate stage may not proceed to undertake the dissertation module.

Compensation Credits

4.3 A student who shows strength in other modules may be awarded compensation credits for a module despite obtaining a mark lower than the pass mark specified in accordance with Regulation 4.2. Such credits will be awarded provided Programme Regulations do not prohibit compensation for the particular modules concerned and provided that the student meets at least one of the following conditions:

For the Degree of Master:

(i) The student has achieved an overall average mark of 50%; and (a) the student has, where applicable, achieved a mark of 50% or higher for the dissertation; and (b) the student has been awarded credit for modules having a total value of not less than 150 credits; and (c) the student has achieved a mark of not less than 40% for the module for which compensation is being considered.

(ii) The student has achieved an overall average mark of 60%; and (a) the student has, where applicable, achieved a mark of 50% or higher for the dissertation; and (b) the student has been awarded credit for modules having a total value of not less than 150 credits; and (c) the student has achieved a mark of not less than 35% for the module for which compensation is being considered.

For the Postgraduate Diploma:

(i) The student has achieved an overall average mark of 50%; and (a) the student has been awarded credit for modules having a total value of not less than 90 credits; and (b) the student has achieved a mark of not less than 40% for the module for which compensation is being considered.

(ii) The student has achieved an overall average mark of 60%; and (a) the student has been awarded credit for modules having a total value of not less than 90 credits; and (b) the student has achieved a mark of not less than 35% for the module for which compensation is being considered.

For the Postgraduate Certificate:

(i) The student has achieved an overall average mark of 50%; and (a) the student has been awarded credit for modules having a total value of not less than 45 credits; and (b) the student has achieved a mark of not less than 40% for the module for which compensation is being considered.

(ii) The student has achieved an overall average mark of 60%; and

(a) the student has been awarded credit for modules having a total value of not less than 45 credits; and (b) the student has achieved a mark of not less than 35% for the module for which compensation is being considered.

Repetition of Assessment

4.4 A student who fails to be awarded credits for a module shall, subject to Regulation 4.13, have the right to repeat the assessment on one subsequent occasion within one year of the first attempt. Exceptionally the Dean of Faculty may permit the student to defer repeating the assessment until two years after the first attempt. Also, if the module is not offered every year, the Board of Examiners may determine that reassessment be deferred until two years after the first attempt.

A student may not repeat the assessment of a module for which credits have been awarded except that the Board of Examiners may permit a student to repeat the assessment of such a module if the mark for it is less than the average mark necessary for the student to gain the award for which the student is registered.

In accordance with Regulation 3.6, a student to whom an award has been approved by the Board of Examiners may not take further modules in order to improve the class or division of that award.

The Board of Examiners may permit the student to proceed with the programme pending reassessment or it may recommend to the Student Progress and Assessment Board that the student's programme be suspended.

4.5 When the assessment of a module comprises more than one piece of assessed work, the student may repeat only the failed pieces of work (unit(s) of assessment) if the student has satisfied the Board of Examiners in the other pieces of assessed work.

4.6 When the reassessment of a failed module is by examination, the student may repeat the examination at the normal time when the module is next offered but the Board of Examiners may permit the student to repeat it on a special occasion not less than two months after the previous attempt.

4.7 When a student repeats an assessment, the assessment shall be that prescribed for the year in which it is repeated, irrespective of any change of syllabus, unless otherwise determined by the Board of Examiners.

4.8 When a student repeats all or part of the assessment of a module, the penalised mark awarded for the re-assessed unit of assessment [6] shall be the actual mark obtained or the arithmetic mean of the actual mark and the pass mark for the module, whichever is the lower.

The best mark achieved from either the first or second attempt will be used for the unit of assessment and, subsequently, in the adjustment of the module mark.

If the adjusted module mark is below the pass mark but a student would have passed the module without applying the penalty for the unit(s) of assessment, the minimum pass mark will be recorded for that module.

The mark recorded on the student's transcript shall be the adjusted

6 A "unit of assessment" is taken to imply a weighted piece of assessment derived from the Programme Specification or Programme Regulations – e.g., essay – 2,000 words] [40%]

mark awarded by the Board of Examiners.

4.9 Subject to the Programme Regulations, a student who has failed to be awarded credits for a module at the first or second attempt may offer an alternative module in place of the failed module on one occasion only.

4.10 The programme of a student, who has failed module(s) and may not be reassessed nor offer alternative module(s), shall be terminated by the Student Progress and Assessment Board.

4.11 A student who is permitted to repeat the assessment of a module and wishes to do so shall give notice in the manner prescribed in the Programme Regulations and pay the appropriate fee.

Repetition of Programme

4.12 A student may be allowed by the Dean of Faculty to repeat attendance at classes of such modules for which the student has failed the assessment.

Unsatisfactory Academic Progress

4.13 The programme of a student may be terminated by the Student Progress and Assessment Board on the recommendation of the Dean of Faculty if the student's academic progress is considered to be unsatisfactory. Before terminating a programme written warning must be given and the student provided with the opportunity to remedy the situation within a given timescale. The Student Progress and Assessment Board may impose conditions under which a student may be allowed to continue the programme.

Similarly, upon the recommendation of the Dean of Faculty, the registration of a student who fails, without specified mitigating circumstances, to attend teaching sessions where such attendance is specified in the programme regulations, programme handbook or module description as compulsory, or a proportion of these, may be terminated by the Student Progress and Assessment Board.

In the case of non-attendance a written warning must be given and where practicable the student provided with the opportunity to remedy the situation either by starting to attend teaching sessions or, at the discretion of the Dean (see para 5.2) by making up any missed compulsory attendance stipulated in the programme regulations. If this involves retaking the complete module at the next available opportunity a resit fee will apply

Should a student fail to remedy the situation within the timescale set out in the warning the student's registration shall be terminated by the Student Progress and Assessment Board

In the case of modules that are failed as a result of a non-submitted assessment or examination (other than in 4.15) a mark of 0% for the unit of assessment will be awarded and the student' will retain the right to reassessment as in 4.4.

A student may be excluded from the University for other than academic reasons in accordance with the provisions of Statutes 5(5)(B) and 26.

Fitness to Practise

4.14 A student registered for a programme of study which includes one or more period(s) of clinical and/or professional experience is required, at all times and as a condition of continued registration for that programme, to act or behave in a manner which:

a) conforms to the relevant professional code of practice, if any; and/or

b) is consistent with behaviour required by the profession or employer;

and/or

c) does not jeopardise or put at risk the welfare or wellbeing of others (e.g., patient, pupil, client, members of the public, fellow student, fellow employee, member of academic or professional/clinical staff) or him or herself.

The University reserves unconditionally the right to exclude or withdraw a student from a clinical or professional placement without notice on grounds of unprofessional behaviour, professional misconduct, and/or if it believes that the student's behaviour has the potential to cause harm to others or him or herself.

General Regulations Governing Fitness to Practise shall specify the criteria and procedures for dealing with allegations of unprofessional behaviour or professional misconduct. The University may suspend or terminate a student's registration in accordance with the General Regulations Governing Fitness to Practise.

Ill Health	4.15	A student whose performance in an assessment has been impaired by ill health or other circumstance must inform the Dean of Faculty in writing at the earliest opportunity and provide, where appropriate, a medical certificate or other supporting evidence[7]. The Dean of Faculty shall forward to the Chairman of the Board of Examiners copies of any documents received from the student. The Board of Examiners shall consider and may take it into account in making its recommendation to the Student Progress and Assessment Board in respect of that student. If the Board of Examiners is satisfied that the basis of ill-health or other circumstance represents appropriate grounds for mitigation, the Student Progress and Assessment Board may, on the recommendation of the Board of Examiners, allow the student to undertake an examination or other form of assessment again as if for the first time. In such circumstances, a student's right to assessment on one further occasion in case of failure (Regulation 4.4) shall remain unaffected; any marks arising from the initial attempt shall be disregarded for the purposes of progression and for recording on the student's transcript.
Absence from an Examination	4.16	A student who is unable to take all or part of a formal assessment because of ill-health or other circumstance must inform the Dean of Faculty as soon as possible and, where appropriate, submit a medical certificate or other supporting evidence within seven days. The Dean of Faculty shall forward copies of any document received from the student to the Chairman of the Board of Examiners. The Board of Examiners, if satisfied that the student had sufficient reason for not undertaking the assessment, shall permit the student to be assessed on a subsequent occasion. If the Board of Examiners is satisfied that the basis of ill-health or other circumstance represents appropriate grounds for mitigation, the Student Progress and Assessment Board, on the recommendation of the Board of Examiners, may allow the student to undertake the assessment on a subsequent occasion, which shall be regarded as the first attempt in accordance with 4.15. It is the responsibility of the student to determine whether to undertake the assessment or apply to defer so doing in accordance with regulations 4.16, 4.17 and 4.18. Once the result of an assessment has been promulgated by the Board of Examiners this result can only be set

[7] Guidance for students on mitigating circumstances can be found under "Services for Current Students" at: http://portal.surrey.ac.uk/registry/exams ; or, for the guidance of Boards of Examiners, as an Appendix to section VII of the Academic Standards Guidelines.

aside in exceptional circumstances by the Student Progress and Assessment Board.

If such a student has been able to undertake at least three quarters of the assessment of any module, the Board of Examiners may award a mark or grade and the appropriate credits as if the student had undertaken the whole of the assessment. The Student Progress and Assessment Board may, however, allow this provision to apply to a student who has been able to undertake at least one half of the assessment of a module.

4.17 On the recommendation of the Board of Examiners, the Student Progress and Assessment Board may permit a student who has been unable, owing to ill health, to gain the required credits to proceed from one stage of the programme to the next. Except as below, the student shall undertake the assessment at a later time, normally in the following year or when the assessment for the module(s) is next arranged.

4.18 In the case of a student who has been unable to take part or parts of the assessment constituting not more than one sixth of the credits in total at levels HE3 and/or M, the Student Progress and Assessment Board, on the recommendation of the Board of Examiners, may award the relevant credits as though the student had taken the whole of the assessment and without requiring the student to undertake the outstanding assessment, provided:

(i) it has evidence of the student's ability to meet the learning outcomes of the module(s); and

(ii) it has evidence that requiring the student to undertake the outstanding assessment would be detrimental to the student's health or well-being.

In the event that the Student Progress and Assessment Board awards credit for one or more module(s) under this Regulation, no mark will be awarded for the module(s) and the calculations for the level and for the classification of the degree or other award, shall be made without reference to the particular module(s).

Viva Voce

4.19 The Board of Examiners may require any student to be examined *viva voce* in addition to undertaking assessments prescribed in the Programme Regulations.

Dissertation

Nature of Dissertation or Equivalent Work

5.1 Except with the special permission of the Senate, Programme Regulations shall require that a student for the Degree of Master shall present a dissertation on a subject relevant to the programme, or undertake such equivalent major project as may be specified in the Programme Regulations. The choice of subject and title of the dissertation or equivalent project shall be determined in the manner specified in the Programme Regulations. When an equivalent project is undertaken the following regulations shall apply as far as possible having regard to the nature of the project.

Reference to Work of Others

5.2 A student shall indicate by means of explicit references the citation of the work of others or work by the student which is not part of the submission for the Degree. Work submitted for another Degree may not comprise part of the submission for the Degree of Master.

Joint or Group Project

5.3 When two or more students have conducted a joint or group project, each student shall normally submit a separate dissertation in accordance with Programme Regulations. Each student shall be required to satisfy the examiners that the student's share of the work is sufficient to justify the award of the Degree by means of an introductory note and in the

case of a joint dissertation, shall be required to specify the contribution(s) made by the student to the dissertation. A copy of such a note should be countersigned by the co-workers.

5.4 The dissertation, or other work in place thereof, shall be submitted within the time limit specified in Regulation 2.10.

Format of Dissertation

5.5 The dissertation shall be typed on A4 size paper. It shall be bound in a form specified in the Programme Regulations. All pages should be numbered. The title page shall bear the title, approved in accordance with the Programme Regulations, the student's name, the Degree for which the student is registered and the year in which the dissertation is presented. A summary of the work, not exceeding three hundred words in length must follow the title page. Wherever possible, subsidiary papers and other material should be bound in but a student is at liberty to submit such material separately for consideration by the examiners.

The dissertation shall be written in English except when permission is given, in accordance with the Programme Regulations, for another language to be used owing to the nature of the subject. The summary must always be written in English.

5.6 Two copies of the dissertation must be submitted to the student's Faculty for examination in accordance with Regulation 5.5. A student is advised to keep an additional copy for personal use.

5.7 No alterations or additions may be made to a dissertation after it has been submitted except with the agreement of the examiners in accordance with Regulation 5.8.

Examination of Dissertation

5.8 The examiners shall ascribe to the dissertation a mark in the range 0-100% and shall report on the dissertation in the manner prescribed in the Programme Regulations. They shall make one of the following recommendations, as appropriate:

(i) that the dissertation is of pass standard;

(ii) that the dissertation is of pass standard, subject to specified, minor corrections[8] being made to the copies of the dissertation;

(iii) that the dissertation be failed, but that the student be permitted to submit a revised dissertation by a specified date within 6 months;

(iv) that the dissertation be failed.

If specified, minor corrections are required in a dissertation, the examiners shall inform the student of the nature of the corrections in the form of a written list, a copy of which shall be sent to the University Examinations Officer or will be appended to the Examination Entry Form, as appropriate.[9]

Specified, minor corrections shall be completed within 40 days of the student being informed of the result of the examination, unless the Student Progress and Assessment Board allows a longer time. The dissertation shall be permanently bound within the same time limit if it was not so bound when examined. One of the examiners shall certify that any corrections have been completed satisfactorily and included in the bound dissertation.

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8 The phrase “specified, minor corrections” shall be taken to include the correction of minor omissions, minor errors of fact, typography, grammar, style, syntax and/or layout of graphs/tables etc., which would enhance the reader’s understanding of the author’s argument but which do not alter the intellectual content and reasoning of the dissertation.

9 The examiners may indicate in general terms a need to correct grammar and/or spelling, and, in addition, may return to the student an annotated copy of the dissertation.

If the corrections are not satisfactorily carried out within 40 days or such longer time as may be specified by the Student Progress and Assessment Board, the student shall be permitted by the Student Progress and Assessment Board to submit a revised thesis or portfolio by a specified date without a further *viva voce* examination.[10]

5.9 Before the Degree of Master may be awarded to a student who has submitted a satisfactory dissertation, at least one copy must be permanently hard bound in blue cloth; the Degree, the year and the student's name shall appear on the spine. If the dissertation has been awarded a mark of 70% or higher, this hard bound copy shall be placed in the University Library. A second copy shall be soft bound and retained in the student's Faculty but the Programme Regulations may specify that this copy may be replaced by one in a specified computer file format.

Submission of Revised Dissertation

5.10 A Student shall be informed in writing of the Examiners' reasons for the failure of the original dissertation, normally by being sent copies of the external examiners' reports and, as appropriate, a list of specified, minor corrections in accordance with Regulation 5.8.

A student may submit a revised dissertation once only. If the dissertation is not submitted by the specified date the student's registration for the Degree of Master may be deemed to have lapsed; the Student Progress and Assessment Board may, however, grant an extension of the time permitted.

The procedure for submitting a revised dissertation shall be the same as that for submitting the original one, as specified in Regulations 5.5 and 5.7.

A revised dissertation shall normally be examined by the same examiners but the Student Progress and Assessment Board may appoint other examiners. The examiners may not recommend re-submission for a second time but may make one of the recommendations, in accordance with Regulation 5.8(i), (ii) or (iv).

Copyright and Access to Dissertation

6.1 Dissemination of knowledge is one of the objects of the University. Copies of dissertations accepted for the Degree of Master with a mark of 70% or higher will be placed in the University Library and will be available for anyone to consult. A student is therefore advised to mark the dissertation as copyright. It shall, however, be a condition of acceptance of a dissertation that the University Librarian be empowered to reproduce the dissertation by photocopy or otherwise and to lend copies to those institutions or persons who, in the Librarian's opinion, require them for academic purposes.

6.2 If the sponsoring organisation or collaborating body considers that the dissertation contains matter of a confidential nature, the author may instruct the Librarian to restrict access to a dissertation for a period not exceeding five years. Access to the dissertation may be allowed during this period only with permission of person(s) specified by the sponsoring organisation or collaborating body. Similarly, if it is desired to seek a patent from matter in the dissertation, the author may instruct the Librarian to restrict access for a period not exceeding one year. If it is desired to extend the restriction beyond the above periods, or restrict access on other grounds, application must be made by writing to the University Librarian.

[10] The student may also be liable for additional re-examination fees.

Intellectual Property	6.3	While the copyright of the dissertation belongs to the author, a student is required to assign to the University or its nominee any intellectual property rights (whether patentable or otherwise) that the student is considered to have acquired resulting directly or indirectly from study at the University in return for a fair proportion of any net receipts in accordance with the terms of the University's Intellectual Property Code. A student may, however, be subject to a specific agreement with the student's sponsor concerning the assignment of intellectual property rights to the sponsor.

Awards

	7.1	A Postgraduate Certificate or Postgraduate Diploma or the Degree of Master of Arts, Master of Business Administration, Master of Laws, Master of Music, Master of Public Administration, Master of Research or Master of Science shall be awarded by the Senate to a student who has gained at least the number of credits specified in Regulations 3.3, 3.4, 3.5, 3.7, 7.2, 7.3 and 7.4 and has satisfied any other conditions specified in the Programme Regulations. Where the award of Postgraduate Certificate or Postgraduate Diploma is lower than the intended award for the programme of study, the student may elect to decline the award within a period of three months from the date of award, provided that the award has not been made consequent to regulation 4.13. Such a decision must be communicated in writing to the Chair of the Board of Examiners and the Chair of the Student Progress and Assessment Board (Taught).
Date of Award		The date of the award shall be the date on which the Senate approved the award.
Requirements for Awards	7.2	Subject to Regulations 3.1 and 4.3 and the Programme Regulations, a Postgraduate Certificate may be awarded to a student who has gained at least 60 credits and has achieved an average mark of not less than 50%.
	7.3	Subject to Regulations 3.1 and 4.3 and the Programme Regulations, a Postgraduate Diploma may be awarded to a student who has gained at least 120 credits and has achieved an average mark of not less than 50%. When a student has been awarded credits in excess of 120, the overall aggregate mark shall be calculated by reference to those modules which have attracted the highest marks and constitute 120 credits, except where Programme Regulations require that the marks for certain specific modules must be included in the classification.
	7.4	Subject to Regulations 3.1 and 4.3 and the Programme Regulations, the Degree of Master may be awarded to a student who has gained at least 180 credits, has achieved an average mark of not less than 50%, including the dissertation module. When a student has been awarded credits in excess of 180, the overall aggregate mark shall be calculated by reference to those modules which have attracted the highest marks and constitute 180 credits, except where Programme Regulations require that the marks for certain specific modules must be included in the classification.
Distinction and Merit	7.5	The Degree of Master and Postgraduate Diploma will be awarded in accordance with the following mark thresholds:

award *with Distinction*	70%
award *with Merit*	60%
award	50%

Awards made *with Distinction* or *with Merit*, shall be determined in accordance with whichever of the following two parameters is to the advantage of the student:

(i) the overall aggregate mark (including, where a dissertation is required for the degree of Master, the mark for the dissertation) for all assessed modules for the award prescribed by the Programme Regulations. In determining the overall aggregate mark, individual module marks, including as appropriate that for the dissertation, shall be weighted according to the credit value of each module.

(ii) the numbers of modules for which the assessment falls within the *Merit* or *Distinction* threshold band as follows:

Masters Degree

At least 105 credits at level M (excluding any level HE3 modules) at or higher than the indicative class, provided that:

- the overall weighted aggregate mark is at least at the mid point of the class below the indicative class, and
- no more than 30 credits fall within a division two or more below the indicative division.

Postgraduate Diploma

At least 75 credits at level M (excluding any level HE3 modules) at or higher than the indicative class, provided that:

- the overall weighted aggregate mark is at least at the mid point of the class below the indicative class, and
- no more than 30 credits fall within a division two or more below the indicative division.

The Postgraduate Certificate shall not be awarded with either *Distinction or Merit.*

Students in Debt

7.6 No student shall be entitled to an award of the University unless all fees for tuition and residence and any other sums due to the University have been paid, and the rightful property of the University returned.

7.7 The Registrar shall publish the names of those who have been awarded Certificates, Diplomas and Degrees and the classes or categories thereof, in the University Gazette and may publish them elsewhere.

7.8 A Certificate or Diploma shall be sent to each successful student through the ordinary post to the student's address as listed in the University records after the Senate Awards Committee has approved the award.

Formal Conferment

7.9 Degrees shall be formally conferred at congregations held for that purpose. After the conferment each person awarded a Degree shall be given a Degree Certificate. The Degree Certificate shall either be handed to the recipient or sent through the ordinary post to the student's address as listed in the University's records.

7.10 A replacement certificate can be issued only on receipt of a written request and on payment of the appropriate fee.

7.11 At the end of a programme of study, each student, whether successful or not, may obtain, without charge, an official transcript on request. A transcript shall record each module for which the student has registered: the level; the credits awarded (if any); and the mark awarded. It shall

also record, where appropriate, credits from which exemption was granted, credits awarded by compensation and the award obtained. A charge may be made for an official transcript provided at other times.

Appeals

8.1 A student

(a) who, having been offered and exhausted all opportunities to qualify for his or her target award, has reason to believe that he/she has been incorrectly failed and, consequently, may have been awarded an intermediate qualification when a higher qualification should have been awarded;
or

(b) who has not been awarded a qualification with Distinction or with Merit when such a division should have been awarded in accordance with the General and Programme Regulations;
or

(c) who has had his/her programme suspended or terminated in accordance with Regulations 4.4 or 4.10;

may appeal by giving notice in writing to the Dean of Students within two weeks of the formal publication of the results. The grounds for such an appeal may be only one or more of the following:

(i) the marks taken into account for the assessment had been incorrectly recorded, or the calculation of the aggregate mark on which the result was based was incorrect or the procedure for such aggregation had been incorrectly followed;

(ii) there had been irregularities in the conduct of the examination or other forms of assessment, including alleged administrative error, of such a nature as to cause reasonable doubts as to whether the Board of Examiners would have reached the same conclusion if the alleged irregularity had not occurred;

(iii) there had been circumstances which affected the student's performance which the student could not or did not, for valid reasons, divulge, in accordance with Regulation 4.15, before a decision had been reached;

(iv) there was a demonstrable reason to believe that one or more of the examiners were prejudiced or unreasonably biased.

8.2 A student may appeal against the decision by the Student Progress and Assessment Board to terminate the student's programme in accordance with Regulation 4.13. A student wishing to appeal shall give notice in writing to the Dean of Students indicating the grounds of the appeal within two weeks of being informed by the Registrar that the programme had been suspended or terminated. However, an appeal received for good reason beyond this time limit but within three months of being informed that the programme had been suspended or terminated, may be considered.

8.3 In cases where an appeal is being pursued in accordance with the provisions of Regulations 8.1 or 8.2 against a decision to terminate the student’s registration, the appellant’s registration shall remain terminated whilst the appeal is being pursued.

8.4 In the case of an appeal under Regulation 8.1(i), the Dean of Students, in consultation with the Chair of the Board of Examiners or the Chair’s nominee, shall consider whether the marks had been correctly recorded and aggregated in accordance with the Regulations. If an error is found

which affects the award, then the Vice-Chancellor, in consultation with the Dean of Students, the Chair of the Board of Examiners and, if possible, the External Examiner(s) has authority to approve the award. When an error is found the matter shall be reported to the Senate.

8.5 In the case of an appeal under Regulation 8.1(ii), 8.1(iii), 8.1(iv) or 8.2, the Dean of Students shall conduct an initial appraisal of the alleged grounds. If there is evidence that the alleged grounds do not satisfy the regulations, the appeal shall be dismissed. If there is sufficient evidence that the alleged grounds may satisfy the regulation, however, the Dean of Students shall consult the Deputy Vice-Chancellor (Academic Development) and they shall then jointly determine whether the alleged grounds satisfy the regulations or whether the appeal shall be dismissed.

8.6 The original decision may be referred for reconsideration by the Board of Examiners, if grounds are 8.1(ii) or 8.1(iii), or the appeal shall be heard by an Appeal Committee constituted in accordance with Regulation 8.7.

8.7 An Appeal Committee shall comprise:
Chair:
A Deputy Vice-Chancellor nominated by the Senate.
Members:
A member of the academic staff from a Faculty other than that of the appellant, nominated by the Vice-Chancellor from the elected members of the Senate.
A Postgraduate student from a Faculty other than that of the appellant, nominated by the President of the Students' Union.
In attendance:
The Registrar or his/her representative.

8.8 The proceedings of an Appeal Committee shall not be invalid if, before the Committee has reached a decision, a member ceases to hold the office by virtue of which the member was appointed to the Committee.

8.9 The Appeal Committee shall have authority to determine the case put to it; its decision shall be final. If the decision affects the award or class of Degree, the Deputy Vice-Chancellor, shall approve the award or reclassification on behalf of the Senate. The decision of the Appeal Committee shall be reported to the Senate.

Made by Senate: 20 June 1995

Last Revised: 20 May 2008

19. PROGRAMME REGULATIONS

1.0 Introduction

1.1 This document should be read with reference to any General Regulations for Higher Awards of the University of Surrey for Students Pursuing Programmes on a Modular Basis, available at http://libweb.surrey.ac.uk/calendar/cream/genregshigher.htm , and to the most recent Programme Handbook. The General Regulations apply unless otherwise stated below.

1.2 The Academic Board of Studies for the programme reserves the right to amend or revise these Regulations as necessary.

1.3 In this document the term “aggregate mark” means the credit-weighted average.

2.0 Admissions and Registration

2.1 Admission and registration to the programme are governed by the General Regulations for Higher Awards of the University for Students Pursuing Programmes of Modular Study.

2.2 Each student must register for individual modules in each semester by the date specified in the most recent Programme Handbook. Except as may be determined in accordance with Regulations 4.15 and 4.16 of the General Regulations for Higher Awards of the University of Surrey for Students Pursuing Programmes on a Modular Basis, a student who does not complete a module for which the student is registered shall be deemed to have failed the module.

2.3 Subject to the provisions of Regulation 2.11 of the General Regulations for Higher Awards of the University of Surrey for Students Pursuing Programmes on a Modular Basis, the maximum period of registration, reckoned from the date of a student's initial registration, shall be:

Postgraduate Certificate	Twenty-four Months
Postgraduate Diploma	Twenty-four Months
Master’s Degree	Twenty-four Months

The Student Progress and Assessment Board, on the recommendation of the Head of Faculty, may extend the maximum period of registration specified above for a given award for an individual student by not more than one year at a time.

3.0 Programme of Study

3.1 The Programme of Study for the MSc is governed by the General Regulations for Higher Awards of the University for Students Pursuing Programmes on a Modular Basis.

3.2 The most recent version of the Programme Handbook describes the modules which comprise the programme.

4.0 Assessment

4.1 Assessments for the programme are governed by the General Regulations for Higher Awards of the University for Students Pursuing Programmes on a Modular Basis.

4.2 The means of assessment will vary for each module and is described in the most recent version of the Programme Handbook.

4.3 A candidate who has not obtained an aggregate mark of 50% for 8 taught modules may not start the dissertation module.

4.4 A student who shows strength in other modules may be awarded compensation credits for a taught module despite obtaining a mark lower than the pass mark of 50%. Such credits may be awarded at the discretion of the Board of Examiners following the completion of the taught modules or subsequent assessments, provided:

For the Degree of Master/Postgraduate Diploma:

either:

(i) the student has achieved an aggregate mark of 50% for the 8 taught modules;

(ii) the student has been awarded credit for taught modules having a total value of not less than 90 credits;

(iii) the student has achieved a mark of not less than 40% for the taught module(s) for which compensation is being considered;

or:

(i) the student has achieved an aggregate mark of 60% for the 8 taught modules;

(ii) the student has been awarded credit for taught modules having a total value of not less than 90 credits;

(iii) the student has achieved a mark of not less than 35% for the taught module(s) for which compensation is being considered;

For the Postgraduate Certificate:

either:

(i) the student has achieved an aggregate mark of 50% for 4 taught modules;

(ii) the student has been awarded credit for taught modules having a total value of not less than 45 credits;

(iii) the student has achieved a mark of not less than 40% for the taught module for which compensation is being considered;

or:

(i) the student has achieved an aggregate mark of 60% for 4 taught modules;

(ii) the student has been awarded credit for taught modules having a total value of not less than 45 credits;

(iii) the student has achieved a mark of not less than 35% for the taught module for which compensation is being considered;

4.5 The dissertation module cannot be compensated.

4.6 The Board of Examiners may permit a student who fails to be awarded credits for a module to repeat the assessment on one subsequent occasion, normally within one year of the first attempt. Exceptionally the Head of Faculty may permit the student to defer repeating the assessment until two years after the first attempt. Also, if the module is not offered every year, the Board of Examiners may determine that reassessment be deferred until two years after the first attempt.

A student may not repeat the assessment of a module for which credits have been awarded except that the Board of Examiners may permit a student to repeat the assessment of such a module for which compensation credits have been awarded.

The Board of Examiners may permit the student to proceed with the programme pending reassessment or it may recommend to the Student Progress and Assessment Board that the student's programme be suspended.

4.7 A student who is permitted to repeat the assessment of a module and wishes to do so, must register for the module and pay the appropriate fee.

5.0 Dissertation

5.1 The preparation and examination of the dissertation for the programme are governed by the General Regulations for Higher Awards of the University for Students Pursuing Programmes on a Modular Basis.

5.2 The credit value for the dissertation module for the programme is 60 credits at level M.

6.0 Copyright and Access to Dissertation

6.1 The copyright and access to dissertation are governed by the General Regulations for Higher Awards of the University for Students Pursuing Programmes on a Modular Basis.

7.0 Awards

7.1 Awards are governed by the General Regulations for Higher Awards of the University for Students Pursuing Programmes on a Modular Basis.

8.0 Appeals

8.1 Appeals are governed by the General Regulations for Higher Awards of the University for Students Pursuing Programmes on a Modular Basis.

APPENDIX A: OUTLINE SYLLABIS

AUTUMN SEMESTER 2008

Module Title:	**Challenges for Computing Professionals**
Module Short Name:	CSM04
Module SITS ID (if known):	**COMM006**

Module Provider (AOU):	Computing	**Subject (3 letters):**	COM
Level:	M	**Number of Credits:**	15
Module Co-ordinator:	GILLAM, Dr Lee		

Module Availability:	Autumn Semester

Assessment Pattern

Unit(s) of Assessment	***Weighting Towards Module Mark(%)***
Computing professionalism report, 2000-2500 words: This is a critical evaluation of real-world situations from professional, ethical and legal perspectives. Includes analysis of a topical issue that has professional, ethical and legal dimensions	50%
2 hour unseen exam (answer 2 questions out of 3)	50%
Qualifying Condition(s) A weighted aggregate of 50% is required to pass the module	

Pre-requisite/Co-requisites

None

Module Overview

IT professionals need to appreciate that technologies do not exist in isolation; they require a broad understanding of law and ethics that will enable them to assess the potential risks *of*, rather than *to*, a project, from a variety of perspectives, in any technology-related undertaking.

Module Aims

The aim of the module is to equip masters level computing students with a rounded knowledge and systematic understanding of the professional, legal, and ethical issues involved in the use of computing in the real world.

Learning Outcomes

By the end of the module students will be able to:

- identify and assess the major responsibilities of the computing professional
- describe and account for a broader view of IT projects and associated risks
- demonstrate a critical awareness of current problems in the subject and present new insights

- demonstrate a systematic understanding of the legal requirements of computing in the real world
- evaluate and critique the ethical requirements of computing in the real world
- demonstrate a critical awareness of standards to the computing profession
- demonstrate a comprehensive understanding of cultural and social dimensions in the computing profession

Module Content

This course will present issues of professionalism, ethics and the law in computing, drawing on the experience of computing professionals and legal experts. Topics include the following:

1. Overview of Module -
General examples of real world risks, issues and impacts

2. Sustainability of Computing and the Computing Profession
History of Computing; Future of Computing; Professional Ethics and Responsibilities; Ethics and Ethical theories; Codes of Ethics and Codes of Conduct; Whistleblowing

3. Plagiarism and Scientific Writing
Determining the basis for Intellectual Property; Academic Honesty and Copyright

4. Intellectual Property and Computer Systems
Copyright, design, and trademarks; Patents, creative commons and open source agreements

5. Data Mining and Privacy
Privacy, Personal Information, Identity and Identify theft; Confidentiality; Relationship to the Data Protection Act

6. Computer Misuse
Worms, viruses and hacking; encryption and interception of messages and the Computer Misuse Act

7. Interoperability and International Standards
Importance of standards and standardisation bodies in computing

8. Computer Reliability
Impacts of Computers on working and Reliability of systems; IT Contracts, terms and conditions

9. Case Studies and Reviews

10 Topics for further consideration
Overview and discussion in relation to recent technological developments.

Methods of Teaching/Learning

30 hours in weeks 1-10, consisting of:
- lectures
- seminars conducted by external speakers with expertise in a relevant topic

Selected Texts/Journals

Required Reading

Baase, Sara. 2003. *A gift of fire: social, legal and ethical issues for computers and the internet.* Prentice Hall.

Recommended Reading

Quinn, Michael. 2006. *Ethics for the information age*. Addison-Wesley.

Bainbridge, David I. 2000. *Introduction to Computer Law* 4th ed, Harlow (England): Longman.

Johnson, Deborah. 2001. *Computer ethics*. Prentice Hall.

Supplementary reading

Jewkes, Y. (Ed.) 2003. *Dot.cons: Crime, deviance and identity on the internet*. Willan.

Newton, J. and Holt, J. (Eds.). 2004. *A Manager's Guide to IT Law*. British Computer Society.

Bott, Frank. 2005. *Professional Issues in Information Technology*. British Computer Society.

Module Title:	Network Technologies
Module Short Name:	CSM05
Module SITS ID (if known):	COMM007

Module Provider (AOU):	Electronic Engineering	Subject (3 letters):	COM
Level:	M	Number of Credits:	
Module Co-ordinator:	CRUICKSHANK, Dr Haitham S.		

Module Availability:	Autumn Semester

Assessment Pattern

Unit(s) of Assessment	*Weighting Towards Module Mark(%)*
2 hour unseen exam	75
Coursework: Networking related assignment	25
Qualifying Condition(s) A weighted aggregate mark of 50% is required to pass the module.	

Pre-requisite/Co-requisites

None

Module Overview

Computer networking is a central technology for the MSc in Internet Computing. The Internet is built up from many millions of connected computers, which employ a range of networking equipment, and these must all operate together and be dynamically reconfigured. This module explores the characteristics of these devices and then shows how communication protocols can provide the static and mobile communication services that we all use today.

Module Aims

The aim of the module is to equip students with a comprehensive understanding of the protocols, services and standards used in the design of computer networks and internetworks so that they have a critical awareness of the basic operation of the Internet, including TCP/IP with particular focus on routing protocols and applications.

Learning Outcomes

On successful completion of the module, students should be able to:

- Demonstrate a systematic understanding of the benefits of layered protocols in the context of various local area network architectures, TCP/IP protocol family and Internet applications.
- Apply gained theoretical knowledge to be able to design heterogeneous local area networks and Inter-networks.
- Critically assess dynamic and distributed routing protocols for the Internet and identify the main factors affecting their performance
- Show critical awareness of the role of the transport layer and the mechanisms used to support connection management and congestion control in TCP and its related applications.

Develop and demonstrate basic research skills in the areas of TCP/IP for IP neworking, muticasting, security and Quality of Service.

Module Content

Introduction: background; network types and topologies; the OSI model; the TCP/IP model; digital communication fundamentals [2 hours]

Local Area Networks: framing and error control; Ethernet, Fast Ethernet and Gigabit Ethernet; Token Bus

and Token Ring; FDDI; LAN interconnection; virtual LANs [3 hours]

Wireless LANs and Bluetooth: architectures and protocols [1 hour]

Internetworking: introduction; circuit switching and packet switching; IP routing, addressing and subnetting; routers; Address Resolution Protocol (ARP); Internet Protocol (IP); Internet Control Message Protocol (ICMP) [3 hours]

Network routing: fundamentals (centralised, distributed and isolated routing; static and dynamic routing); source routing; flooding; distance vector (Bellman-Ford, RIP) and link state (Dijkstra, OSPF) routing algorithms and protocols [3 hours]

Transport layer protocols: the role of the transport layer in TCP/IP; connection management; transmission and congestion control with sliding windows; detailed view of The Transport Control Protocol (TCP), User datagram Protocol and Realtime Transport Protocol (RTP). [3 hours]

The TCP/IP application layer protocols:, Telnet, FTP, DNS SMTP; SNMP; HTTP; WWW, VoIP, SIP and H323 architecture [3 hours]

Advanced Network Applications: Overlay networks; principle of Peer-to-peer (P2P) communications; P2P applications (Gnutella, Napster, Chord, Skype etc.), Grid Computing [3 hours]
Network security architecture; Security basics, Internet security architecture, IPsec, Transport layer security (TLS), multicast security and secure web services. [3 hours]

IP Multicast: principles and applications [1 hour]

Mobile IP: principles and routing [1 hour]

IP Quality of service: traffic categories; Integrated Services; Differentiated Services [1 hour]

Methods of Teaching/Learning

- 30 one-hour lectures in weeks 1-10, to include problem-solving sessions.

Selected Texts/Journals

Essential reading

Tanenbaum, A.S. Computer Networks, 4th ed, Prentice-Hall 2003, ISBN 0-13-038488-7

Recommended reading

Forouzan, B.A. Data Communications and Networking, 4th ed, McGraw-Hill, ISBN 0-07-118160-1

W. Stallings, "Data and computer communications", 6th Ed 2000 or 7th Ed 2004, Prentice-Hall

Supplementary reading

None

Module Title:	Computer Security
Module Short Name:	CSM27
Module SITS ID (if known):	COMM024

Module Provider (AOU):	Dept. Computing	Subject (3 letters):	COM
Level:	M	Number of Credits:	15
Module Co-ordinator:	Dr. Hans Georg Schaathun		

Module Availability:	Autumn

Assessment Pattern

Unit(s) of Assessment	*Weighting Towards Module Mark(%)*
Written, unseen examination (answer two out of three questions)	60
Portfolio based on a selection weekly exercises. (9-10 weekly exercise sheets are given and discussed in class. Three of these papers, 2 nominated by the convener and 1 by the individual, are included in the portfolio, together with a concluding essay.)	40
Qualifying Condition(s) An aggregate mark of at least 50%	

Pre-requisite/Co-requisites

None

Module Overview

Security is probably the greatest challenge for computer and information systems in the near future. Many users have lost data due to viruses, both on home and business computers. Most of us have seen a range of email messages attempting different kinds of fraud.
Security holes can potentially affect all of us, from innocent home users to complex corporate systems. Internet banking and e-commerce means that money is at stake, even for common people.
This module will explain some central security models and frameworks, which will be further illustrated by case studies where we get experience with real-life security problems.

Module Aims

The aim of the module is to equip the students with knowledge and theoretical skills to assess security in large systems and to incorporate security in the design process.

Learning Outcomes

At the end of the module, the students will
• understand and be able to use formal models for computer security
• be aware of the many security pitfalls at the various stages of systems development
• be able critically to review security at each stage of the development process

Module Content

• Foundations of Computer Security
• Identifcation and Authentication
• Access Control as a Case Study
• Formal Models, including
_ State Machine Modles
_ Bell-LaPadula Model
_ Chinese Weall Model
• Security Evaluation
_ Evaluation methodology

_ The Orange Book
• Software Security
_ Input checking
_ Broken abstractions
_ Memory management and buyer overflows

Methods of Teaching/Learning

• 3-hour session every week for ten weeks, including c. 1h discussion (exercise review) and c. 112 h lecture (new material).
• Weekly exercises to be completed between sessions and peer-assessed in class.

Selected Texts/Journals

Essential reading
[1] Dieter Gollmann. Computer Security. Wiley, 2nd edition, 2006.
Recommended reading
• IEEE Security and Privacy (magazine)
Pay attention to module web pages for additional reading recommendations.
Supplementary reading
[2] Matt Bishop. Computer Security. Addison-Wesley, 2003.
[3] Charles P. P_eeger and Shari Lawrence P_eeger. Security in Computing. Prentice Hall, 4th edition, 2007.
[4] B. Schneier. Secret and Lies: Digital Security in a Networked World. Wiley, 2000.

Module Title:	**Enterprise Systems Development**
Module Short Name:	CSM02
Module SITS ID (if known):	**COMM030**

Module Provider (AOU):	Computing	**Subject (3 letters):**	COM
Level:	M	**Number of Credits:**	15
Module Co-ordinator:	Dr Bogdan Vrusias		

Module Availability:	**Autumn**

Assessment Pattern

Unit(s) of Assessment	***Weighting Towards Module Mark(%)***
Coursework I: Developing a web application based purely on client-side technologies	25
Test I: Open book test, based on client-side development technologies only (a compiler will be available, but not Internet access)	15
Coursework II: Developing a web application based on both client and server technologies, including the spring framework that needs to be utilised	40
Test II: Open book test, based on the entire module (a compiler will be available, but not Internet access)	20
Qualifying Condition(s) A weighted aggregate mark of 50% is required to pass the module.	

Pre-requisite/Co-requisites

Module Overview

The computer industry, and specifically enterprises, requires distributed and interoperable information systems in order to function and remain competitive. Such distributed systems evolve continuously due to cheaper availability of hardware and high-speed communications. This evolution has drawn new lines in systems architecture design development and allows big corporations to build robust, modular, and reusable components. This module tries to demonstrate the latest and most popular technologies used for building enterprise applications. Example topics of study include n-tier architectures, integration approaches, build and test environments, persistence approaches, and performance issues. Although the module covers theoretically most popular technologies, it focuses on Java and J2EE implementation principles.

Module Aims

The main aim of this module is to develop the necessary skills and familiarity to use state-of-the-art technologies to develop distributed systems in an enterprise environment.

Learning Outcomes

By the end of the module the students should be able to:

1. understand the concept of clients and servers and databases, and examine technologies used to support distributed applications.
2. understand the architectural and programming paradigms used in enterprise distributed system

development
3. categorise and evaluate these tools according to different criteria such as applicability and ease of use, and intelligently participate in the selection of appropriate tools and architectures, or combination, to solve enterprise-related problems;
4. use the presented technologies in practice to develop enterprise distributed applications.

Module Content

Introduction to enterprise distributed systems:
- The concept of enterprises
- Architecture and programming paradigms for distributed system development.
- The notion of *n*-tier architectures: clients, servers and middleware.

Client-side Web programming:
- Client-side scripting languages: JavaScript.
- Rich client experience: Ajax

Programming Web Servers:
- Principles of servlets and JavaServer Pages.
- Developing applications for accessing relational databases.

Web Application Frameworks
- Principles of frameworks.
- Popular frameworks: Spring, Struts 2 and JSF
- Persistence principles with Hibernate

Enterprise Systems:
- Building and maintaining enterprise systems

Methods of Teaching/Learning

The module will consist of approximately 15 hours of lectures and 15 hours of lab sessions.

Selected Texts/Journals

No specific book is required for this module. There are many Web-based resources available, linked from the module Web page.

Recommended books are:
- Kayal D., Pro Java EE Spring Patterns: Best Practices and Design Strategies Implementing Java EE with the Spring Framework, Apress, 2008, ISBN: 1430210095
- Vukotic J., Chakraborty A., Ditt A. & Machacek A., Pro Spring 2.5, Apress, 2008, ISBN: 1590599217
- Ahmad Reza Seddighi, Pro Spring Persistence with Hibernate, Apress, 2008, ISBN: 1430216484
- Jendrock, E., Ball, J., Carson, D., Evans, I., Fordin, S., and Haase, K., The Java EE 5 Tutorial, 3rd Ed., Prentice Hall, 2006, ISBN: 0321490290
- Walls C. & Breidenbach R., *Spring in Action*, 2nd Ed., Manning Publications, 2007, ISBN: 1933988134
- Ince, D., Developing Distributed and E-commerce Applications, 2nd Ed., Addison-Wesley, 2003, ISBN: 0-321-15422-3.
- Todd, N., Szolkowski, M., JavaServer Pages: Developer's Handbook, or otherwise called, JavaServer Pages 2.0 Unleashed, Sams, 2003, ISBN: 0672324385.
- Deborah, K., Doing Web Development: Client-Side Techniques, Apress, 2002, ISBN 1-893115-87-9.
- Kochmer, C. and Frandsen, E., JSP and XML: Integrating XML and Web Services in Your JSPTM Application, Addison-Wesley, March 2002, ISBN: 0-672-32354
- Coulouris, G., Dollimore J., and Kindberg, T., Distributed Systems - Concepts and Design, 4th Ed., Addison Wesley, 2005, ISBN: 0-321-26354-5.

SPRING SEMESTER 2009

Module Title:	**Peer-to-Peer Computing**
Module Short Name:	CSM13
Module SITS ID (if known):	**COMM011**

Module Provider (AOU):	Computing	**Subject (3 letters):**	COM
Level:	M	**Number of Credits:**	15
Module Co-ordinator:	Dr Nick Antonopoulos		

Module Availability:	**Spring Semester**

Assessment Pattern

Unit(s) of Assessment	***Weighting Towards Module Mark(%)***
Annotated Bibliography	20%
Project Report	60%
Course Viva	20%

Qualifying Condition(s)
A weighted aggregate mark of 50% is required to pass the module.

Pre-requisite/Co-requisites

None

Module Overview

Module Aims

The course has two aims: Firstly to provide an in depth coverage and critical evaluation of the concepts, techniques and applications of Peer-to-Peer computing by following a research-oriented approach. Secondly to explore and evaluate the use of software agents as a methodology to model and design efficient Peer-to-Peer networks.

Learning Outcomes

By the end of the module the students are expected to be able to:

1. demonstrate adequate skills in carrying out a small-scale, research-oriented project in the domain of P2P networks and software agents under supervision;
2. comprehend in detail the nature, concepts and techniques of P2P technology and its standards;
3. solve a non-trivial theoretical or practical problem in a selected topic in the context of a typical P2P network;
4. critically evaluate current P2P systems and techniques;
5. adequately assess the significance and correctness of published P2P research;
6. present their ideas professionally and coherently;

Module Content

PART I Introduction to P2P Networks and Software Agents (wks 1-4)

1. Agent definitions, characteristics, benefits and taxonomies.
2. P2P networks: definition, topologies, classes, search techniques and relationship to multi-agent systems.
3. Research techniques: Writing scientific papers and summarising research articles.

4. Example P2P networks & their agent-oriented modelling: Chord, Gnutella.

PART II Topics in Peer-to-Peer Computing (wks 5-10)

1. Resource Discovery in P2P Networks: Blind search, informed methods, hash tables, multi-layer and super-peer systems. Performance metrics. Search mechanism comparisons. (*3 weeks*)
2. Security in P2P environments: trust definition and calculation, trust management systems. Incentives in Peer-to-Peer systems and P2P economies.
3. Grid Computing: Underlying principles & comparison to the P2P paradigm.
4. P2P Applications and Module summary.

Methods of Teaching/Learning

This is a research-based module. It will comprise 30 hours of seminars, tutorials and discussions.

Selected Texts/Journals

- Steinmetz, R & Wehlre K. (Eds). *Peer-to-Peer Systems and Applications* Springer, 2005, LNCS 3485, ISBN 3-540-29192-X **[B]**
- Bradshaw, J (Ed). *Software Agents* AAAI Press, 1997, ISBN 0262522349 **[B]**
- Taylor, I. *From P2P to Web Services and Grids* Springer, 2004, ISBN 1-852-33869-5 **[C]**
- Brenner, W., Zarnekow, R & Wittig, H. *Intelligent Software Agents: Foundations and Applications* Springer-Verlag, 1998, ISBN 3-540-63411-8 **[C]**

Module Title:	**Intelligent Information Systems**
Module Short Name:	CSM10
Module SITS ID (if known):	**COMM010**

Module Provider (AOU):	Computing	**Subject (3 letters):**	COM
Level:	M	**Number of Credits:**	15
Module Co-ordinator:	WELLS, Professor Ian		

Module Availability:	Spring semester

Assessment Pattern

Unit(s) of Assessment	***Weighting Towards Module Mark(%)***
Group coursework project: developing a working expert system using the shell provided	30
Individual report: description and critical analysis of the expert system project developed in group coursework	30
Individual in-class tests: ensure a good understanding of the terminology and reinforce theoretical aspects of knowledge representation on computers	40
Qualifying Condition(s) A weighted aggregate of 50% is required to pass the module	

Pre-requisite/Co-requisites

None

Module Overview

Students are challenged to arrive at their own understanding of ‘intelligent behaviour’ in humans, and to explore the different ways in which this can be replicated using computers. With this acquired knowledge the module then investigates the major paradigms for representing expert human knowledge on computers, and compares those which require human knowledge to be re-engineered (including rule-based systems) with those which are trained by humans and can mimic the working of the human brain (neural networks). The coursework requires the students to form into groups and build a working expert system using the open-source shell provided.

Module Aims

The aim of the module is to equip students with the skills and critical awareness of the concept of ‘intelligence’ and human cognitive processes, and how these can be replicated in ‘intelligent’ computer systems. This will include a comprehensive understanding of knowledge representation schema and inferencing techniques, and the application of this understanding to the development of a working knowledge-based system.

Learning Outcomes

The students who successfully complete the module will learn to:
• identify and show critical awareness of the cognitive basis of human problem solving and decision making
• apply their knowledge in an original way to select the most appropriate knowledge representation paradigm for a given task
• critically evaluate the expert knowledge required for solving a specialised problem
• work effectively and professionally in small groups, and manage a small but complex project
• apply gained knowledge to construct and evaluate a rule-based advisory system

Module Content

The following topics will be covered in the module:
• introduction to artificial intelligence (with a medical flavour)
• cognitive processes including perception, attention, categorization and problem solving
• semantic networks, production rules, frames and case-based reasoning
• case study: inside MYCIN - a classic expert system
• managing uncertainty and incomplete information
• how to design and build a knowledge-based system using 4D software tools
• historical and biological background to neural computing
• learning in neural networks, including supervised and unsupervised learning
• future directions including ubiquitous computing

Methods of Teaching/Learning

30 contact hours in weeks 1-10, consisting of:

- 20 hours of lectures and tutorials
- 10 hours of practical sessions, discussion groups and in-class tests

Selected Texts/Journals

Essential reading

Negnevitsky M: *Artificial Intelligence - A Guide to Intelligent Systems* (Addison-Wesley 2004 2nd edition)

Recommended reading

Giarratano J and Riley G: *Expert Systems - Principles and Programming* (PWS 1998 3rd edition)
Parkin AJ: Essential Cognitive Psychology (Psychology Press 2001)

Background reading / other resources

Turban E and Aronson JE: *Decision Support Systems and Intelligent Systems* (Prentice Hall 2000 6th edition)
Jackson P: *Introduction to Expert Systems* (Addison Wesley 1998 3rd edition)
Winston PH: *Artificial Intelligence* (Addison-Wesley 1993 3rd edition)
Callan R: *The essence of neural networks* (Prentice Hall 1999)
Gurney K: *An introduction to neural networks* (UCL Press 1997)
Johnson-Laird P: *The Computer and the Mind* (Fontana1993 2nd edition)
Hofstadter D: *Gödel, Escher, Bach: An Eternal Golden Braid* (Penguin 1979)

Module Title:	**Security and Cryptography**
Module Short Name:	CSM14
Module SITS ID (if known):	**COMM012**

Module Provider (AOU):	Computing	**Subject (3 letters):**	COM
Level:	M	**Number of Credits:**	15
Module Co-ordinator:	HEATHER, Dr James		

Module Availability:	**Spring Semester**

Assessment Pattern

Unit(s) of Assessment	***Weighting Towards Module Mark(%)***
Class test (covering lecture and lab material)	30%
Cryptography project report (writing software to crack a given historical cipher)	45%
Cryptography project presentation (demonstration of the above software on a previously unseen ciphertext)	25%
Qualifying Condition(s) Weighted average of 50% over the three assessments	

Pre-requisite/Co-requisites

None

Module Overview

The module acts as an introduction to Security and Cryptography. It teaches the basics of historical and modern cryptography, and then considers the application of cryptography to two key areas: security protocols, and electronic voting.

Module Aims

The aim of this module is to equip students with skills and requisite knowledge to evaluate the theoretical principles of private key and public key cryptography, and their application to electronic voting, as well as the modelling and analysis techniques for security protocols.

Learning Outcomes

At the end of the module students should:

- have a systematic understanding of the major cryptographic algorithms and systems
- be able to engage in critical evaluation of a security protocol and its flaws and weaknesses
- be able to assess with a high level of competence the merits and demerits of particular encryption systems, and highlight and exploit problems
- have a comprehensive understanding of the security issues surrounding electronic voting
- be able to critically evaluate voting systems and analyse their security

Module Content

- Introductory overview of cryptography and its history.
- Private key (or symmetric) cryptography
- DES (Data Encryption Standard)
- Public key cryptography
- The RSA algorithm
- Electronic voting: a non-cryptographic solution
- Electronic voting: Prêt à Voter

- Authentication and secrecy protocols
- Attacks on security protocols
- Modelling of security protocols

Methods of Teaching/Learning

30 contact hours in weeks 1-10 consisting of:

- 10 hours of lectures;
- 10 hours of tutorials and lab sessions;
- 10 hours of student-led seminars

Selected Texts/Journals

Required Reading:

Singh S., *The Code Book*, Random House

Recommended Reading:

Ryan P., Schneider S., Goldsmith M., Lowe G. and Roscoe A. W., *Modelling and Analysis of Security Protocols*, Addison-Wesley 2000

Stallings W., *Cryptography and Network Security*, Prentice Hall 2002 (third edition)

Supplementary reading

Garfinkel S. and Spafford G., *Web Security and Commerce*, O'Reilly 1997

Gollman D., *Computer Security*, Wiley 1999

Pfleeger C., *Security in Computing* (second edition), Prentice Hall 1997

Schneier B., *Applied Cryptography: protocols, algorithms and source code in C* (second edition), Wiley 1996

Schneier B., *Secrets and Lies: digital security in a networked world*, Wiley 2000.

Schroeder M., *Number Theory in Science and Communication* (third edition), Springer 1997

Module Title:	Component –Based Software Engineering
Module Short Name:	COM15
Module SITS ID (if known):	COMM013

Module Provider (AOU):	Computing	Subject (3 letters):	COM
Level:	M	Number of Credits:	15
Module Co-ordinator:	KRAUSE PJ Prof. (Computing)		

Module Availability:	Spring Semester

Assessment Pattern

Unit(s) of Assessment	*Weighting Towards Module Mark(%)*
Written Project Proposal. A 2 page report due by end of Week 4	20%
Design and implementation of a Component-Based System. This will consist of the development of a small project demonstrating use of the main features of the EJB architecture, plus an approximately 10 page report describing the design and development of the software project.	80%
Qualifying Condition(s) A weighted aggregate mark of 50% is required to pass the module.	

Pre-requisite/Co-requisites

CSM02 – Internet Software Development

Module Overview

Large-scale software systems have traditionally been built as tightly integrated structures with a hierarchical method of control. The internet provides scope for rapidly configuring new systems from "federations" of software components with a distributed method of control. Indeed, the use of components (whether exploiting the internet or not) merely aligns software engineering with traditional manufacturing and has the potential to: reduce time-to-market; improve quality; increase reliability; reduce cost; ease maintenance; and add flexibility to enable product lines to be rapidly adapted to new market trends. This course will focus on the use of the Java/Enterprise Java Beans component model to build internet-based applications.

Module Aims

The aim of this module is to equip students with the skills to develop and deploy Java components as Web Services, and understand the basics of integrating services/components.

Learning Outcomes

By the end of this course, students will be able to:

- recognise the main issues that need attention for successful component-based software development;
- demonstrate a high degree of competence in using Enterprise Java Beans (EJB) for software development;
- design and develop a simple internet application using software components; and
- understand the basic research issues in component-based software engineering.

Module Content

The Module is divided into the following areas:

- Introduction to Component-Based Software Engineering
- The EJB Architecture
    - EJB Containers and their responsibilities
    - Entity Beans

- Session Beans
- Deploying Java Components as Web Services
  - Introduction to the Enterprise tools in NetBeans
  - Building a Persistence Unit
  - Encapsulating Business Logic
- Composing Services into Workflows
  - Basics of Process Modelling
  - Consuming Web-services in NetBeans
  - Using BPEL to guide service integration

Methods of Teaching/Learning

30 Contact hours in Weeks 1-10 consisting of 10 3-hour lecture/tutorial sessions.

Selected Texts/Journals

Essential (A):
Head First EJB: Passing the Sun Certified Business Component Developer Exam (Paperback)
by Kathy Sierra and Bert Bates. Publ: O'Reilly

The Java EE 5 Tutorial. Available in either online version or pdf from:
http://java.sun.com/javaee/reference/tutorials/

Module Title:	**Visual Information Systems**
Module Short Name:	CSM16
Module SITS ID (if known):	**COMM014**

Module Provider (AOU):	Department of Computing	**Subject (3 letters):**	COM
Level:	M	**Number of Credits:**	15
Module Co-ordinator:	Dr Lilian Tang		

Module Availability:	**Spring Semester**

Assessment Pattern

Unit(s) of Assessment	***Weighting Towards Module Mark(%)***
First Coursework • Implementation of fundamental concepts based on lab exercise and lectures • Appropriate discussion and analysis of the problems in the tasks	20%
Interim Viva • In-depth understanding of all the elements covered in the module • Identification and basic understanding of related literature for the course project • Formulation of a realistic project plan	20%
Final Presentation on the Project • In-depth understanding of the selected project topic and the proposed solution • Detailed understanding of research literature covered in the module • Demonstrate developed system or explain designed prototype	20%
Project Report (1500-2000 word) • Abstract of the problem and the project • Clarity, structure and professionalism in the presentation of the report • Consistent, accurate and appropriate references • Coherent use of, detailed understanding and evaluation of appropriate literature • Appropriate discussion and analysis of the problems in the research project • Systematic presentation, analysis and evaluation of the system developed or prototype designed • Well argued discussion and conclusions	40%

Students are expected to undertake research-oriented project in the beginning of the spring semester and deliver a 1500-2000 word report at the end of the semester. The completion of the first coursework is essential for students to build technical skills and to understand subject concepts as preparation for the project. In the project students may implement components of visual information systems or conduct surveys of emerging techniques. Students may work individually or in groups but with clearly defined individual work. Students must write individual reports about the project. Details can be found in the Project Proposal for the year, which will be given to students in the beginning of the course.

Qualifying Condition(s)
A weighted aggregate mark of 50% is required to pass the module.

Pre-requisite/Co-requisites

Students need to know at least one programming language (C, C++, Java, or Matlab) for implementing projects. Assistance on using Java and Matlab will be given during the course.

Module Overview

The module is to provide students with an understanding in depth the concepts, technologies and the roles of image processing, pattern recognition, classification and knowledge modelling methods in a variety of visual information applications by following a research-oriented approach.

Module Aims

The module aims to help students gain an understanding on the current study of modelling visual information systems and give students practical skills for design and implementing such systems appropriately for a given application.

Learning Outcomes

By the end of the module students are expected to be able to:

1. Demonstrate adequate skills in carrying out a small-scale, research-oriented project in the field of visual information systems under supervision.
2. Comprehend the nature, concepts and techniques available in the field of visual information systems.
3. Design a visual system prototype or model in a specific application.
4. Apply appropriate technologies to solve a particular problem.
5. Critically evaluate existing visual information systems within the context of current research trend.

Module Content

- Survey the architectures, theories, algorithms, and tools required in building visual information systems.
- Data representation and description
- Image processing
- Visual feature extraction
- From understanding single image to multiple images
- Low-level vision and high-level vision
- From content-based to semantics-based retrieval
- Classification and pattern recognition
- Multiple processors
- Classifier fusion processes and inferential methods
- Knowledge modelling
- Dealing with large scale problems
- Case studies of specific applications like art, museums, medical imaging, image/video analysis and search systems, professional media archives, and digital libraries

Methods of Teaching/Learning

This is a research-based module. The module will develop an understanding for modelling visual information systems through:

- Lectures and seminars including case studies
- tutorials
- In-class discussion

The module will develop practical skills through:

- Lab sessions
- Coursework

Additional support on taught content and student projects will be provided.
All activities will be co-ordinated via the module webpage

Selected Texts/Journals

There is no textbook recommended for purchase.

Sections of books will be given as Optional Reading and will be made available via the Library Article Collection service. Further Optional Reading will be given from online resources, e.g. technical standards and academic journals. The following further reading can be very helpful:

- Nick Efford, Digital Image Processing, A Practical Introduction using Java, Addison Wesley, ISBN 0201596237, May 2000
- Tim Morris (2004), Computer Vision and Image Processing, Palgrave MacMillan, ISBN 0333994515
- Rafael Gonzalez, Richard Woods, Digital Image Processing (International Edition), 2nd Edition, ISBN 0201180758, Prentice Hall, 2002
- Linda G. Shapiro, George C. Stockman (2001), Computer Vision, Prentice-Hall, Inc, ISBN 0-13-030796-3

Module Title:	**Bioinformatics**
Module Short Name:	CSM17
Module SITS ID (if known):	**COMM015**

Module Provider (AOU):	Computing	**Subject (3 letters):**	COM
Level:	M	**Number of Credits:**	15
Module Co-ordinator:	CLARK JY Dr (Computing)		

Module Availability:	**Spring Semester**

Assessment Pattern

Unit(s) of Assessment	***Weighting Towards Module Mark(%)***
2 hour unseen examination	60%
Bioinformatics software evaluation- this comprises a critical review and evaluation of a piece of software used in bioinformatics, consisting of a written report and viva	40%
Qualifying Condition(s) A weighted aggregate mark of 50% is required to pass the module	

Pre-requisite/Co-requisites

None

Module Overview

This module provides students with an introduction and overview of bioinformatics – the interface between computing and biology. This field incorporates leading edge research and provides a major challenge for the analysis and design of Information Systems (IS). One important aspect of IS analysis is to be able to catalogue, classify and recognise patterns in potentially large data sets - much of this analysis is rooted in biological classification systems. Such studies can only be undertaken due to advances in computing: multidimensional cluster analysis, data management and computer simulations of biological systems, structures and form. Modern methods of data analysis, including molecular DNA sequence analysis, are placed in context with more traditional methods of pattern recognition and classification.

Module Aims

The Bioinformatics module provides an appreciation for, and critical awareness of, the wide range of issues that are related to the analysis of biological data. An emphasis is placed on the nature and analysis of such data and students will gain a practical understanding of appropriate software methods for taxonomy, systematics, identification, classification and evolutionary reconstruction using modern computer-based techniques. Also, they will be able to consider biological organisms and systems in a computing and information systems context, have an understanding of life as an information system itself, and appreciate the current direction and potential of modern bioinformatics.

Learning Outcomes

By the end of the module students should:

1. have a systematic understanding of the principles and terminology of bioinformatics, and thus be able to continue to advance their knowledge and understanding in this field;
2. be able to evaluate and select appropriate computer-based methodologies for identification and classification in bioinformatics;
3. be able to critically compare and contrast modern and traditional methods for evolutionary reconstruction;

4. Have an appreciation that living organisms and populations can be viewed as information systems themselves.

Module Content

- Overview of Bioinformatics
  - the variable nature of biological data and methods of dealing with this
  - DNA, RNA, molecular biology, protein synthesis, sequence interpretation and alignment
  - living organisms viewed as Information Systems
- Biological Identification and Classification:
  - historical methods
  - phenetic and phylogenetic systems Practical: DELTA
  - modern methods e.g. cladistics Practical: PHYLIP
- Simulations of Biological Systems and Structures
  - genetic algorithms (GAs) Practical: GAs
  - neural networks (NNs) Practical: NNs
  - virtual reality (Lindenmayer systems) Practical: L-Systems
- Large Databases and Projects Practical: GenBank
  - Species 2000
  - EMBL, PDB

Methods of Teaching/Learning

20 hours of lectures, 10 hours of labs.

Selected Texts/Journals

Required Reading:

Dan E. Krane & Michael L. Rayner (2003), *Fundamental Concepts of Bioinformatics*, Benjamin Cummings Press (Pearson). ISBN 0-8053-4633-3

Recommended Reading:

Pankhurst, R.J. (1991). *Practical Taxonomic Computing*, University Press, Cambridge . ISBN 0-521-41760-0

Bridge, P., Jeffries, P., Morse, D.R. & Scott, P.R. (1998) (eds.), Information *Technology, Plant Pathology & Biodiversity,* CAB International, Wallingford, ISBN 0-85199-217-X

Cynthia Gibas & Per Jambeck (2001), *Developing Bioinformatics Computer Skills*, O'Reilly Press. ISBN 1-56592-664-1

Background Reading:

Pierre Baldi & Søren Brunak (2001), *Bioinformatics – The Machine Learning Approach*, MIT Press [second edition] (A Bradford Book). ISBN 0-26202-506-X

Bioinformatics [journal] (formerly *Computer Applications in the Biosciences*), Oxford University Press

Subject to change

Module Title:	**Mainframe Computing**
Module Short Name:	CSM26
Module SITS ID (if known):	**COMM021**

Module Provider (AOU):	Computing	**Subject (3 letters):**	COM
Level:	M	**Number of Credits:**	15
Module Co-ordinator:	Dr Malcolm Beattie		

Module Availability:	**Spring Semester**

Assessment Pattern

Unit(s) of Assessment	***Weighting Towards Module Mark(%)***
Coursework component	40
Exam (2 hours)	60

Qualifying Condition(s)
A weighted aggregate mark of 50% is required to pass the module

Pre-requisite/Co-requisites

Some familiarity with operating systems and machine architectures would be helpful

Module Overview

The first computers were mainframes. Once computing moved to the desktop and the internet it looked as if mainframes would become obsolete. Many large corporations are now finding that quite the reverse is true. Many see mainframes as the optimal solution when systems and services need to be constantly available, be built with very high levels of data security and implement solutions that are highly scalable to vast data structures.

Module Aims

The module aims to introduce students to the leading industry standard for mainframe design, the IBM Mainframe. It will show how mainframes are specifically optimised to integrate business applications, and to meet the critical transactions and evolving demands of e-business. Students will gain a professional familiarity with the basics of z/Architecture, which is designed to eliminate bottlenecks associated with the lack of addressable memory and automatically directs resources to priority work through the Intelligent Resource Director (IRD).

Learning Outcomes

1. Analyse and evaluate the basic concepts of the System z architecture
2. 2. Demonstrate both a theoretical and practical knowledge of the fundamentals of the System Z Operating System
3. Demonstrate a professional understanding of mainframe computing

Module Content

1. Introduction: mainframe architecture, real-world usage
2. z/OS overview: hardware, virtual storage, workload management, interactive usage
3. Data sets (DFSMS, allocation, VSAM, catalogs)
4. Batch processing: JES, JCL, SDSF, utilities
5. Application programming: design, development process, programming language overview
6. Online workloads: transaction processing and database management
7. Systems programming: customizing the system, change control, system initialization

Additional topics: Security overview (RACF, integrity),
Networking (TCP/IP, SNA, VTAM), Logical Partitioning, device sharing,
clustering, Parallel Sysplex and continuous availability

Methods of Teaching/Learning

Weekly four hour workshops which combine theoretical discussion, systems demonstrations and systems development

Selected Texts/Journals

Ebbers, Mike; O'Brien, Wayne; and Bill Ogden. 2006. *Introduction to the new mainframe: z/OS basics*. IBM. http://publibz.boulder.ibm.com/zoslib/pdf/zosbasic.pdf

Module Title:	**Dissertation**
Module Short Name:	**C**SM00
Module SITS ID (if known):	**COMM002**

Module Provider (AOU):	Computing	**Subject (3 letters):**	COM
Level:	M	**Number of Credits:**	60
Module Co-ordinator:	TANG, Dr Lilian		

Module Availability:	**Run once throughout the year**

Assessment Pattern

Unit(s) of Assessment	***Weighting Towards Module Mark(%)***
Poster Presentation	15
Final Dissertation Report	70
Final Examination	15

Qualifying Condition(s)
The students should have completed the taught element of the MSc successfully and have achieved an overall average of 50% or higher.

Pre-requisite/Co-requisites

See qualifying conditions above

Module Overview

The dissertation is a module that allows a student to undertake a major piece of work that will involve developing and applying material encountered on the course under the guidance of a supervisor, who is normally a member of teaching staff. The dissertation lasts for both semesters and involves practical work and writing a report on the work done. This module is different from all other modules in that the content is determined to a large extent by the student but at MSc level should be research led and/or a significant technical challenge. The dissertation provides a lot of freedom in choosing what to study but on the other hand it requires a lot more independent thought and organisational skills than the majority of modules.

Module Aims

The aim of this module is to develop the student's ability to conduct supervised research leading to the preparation and defence of a quality dissertation document in the chosen specialism. It is expected that the dissertation will be available on the Web.

Learning Outcomes

By the end of the MSc dissertation the students are expected to be able to:

1. competently address one current problem in the broad area of Internet Computing, Information Systems or Security and Technology Applications
2. describe and critically evaluate existing literature relevant to their topic thus demonstrating expertise in their field;
3. apply the concepts, techniques and methods they learned from the taught element of the course in order to design a solution (typically a software system) for their chosen problem;
4. critically evaluate software tools and environments and choose the right combination in order to implement (fully or partially) their design;
5. assess their system by using appropriate metrics such as performance, user acceptance and feedback, security, etc;
6. demonstrate competence in applying the concepts of software lifecycle and systems analysis and design in all stages of the development of their system professionally present technical findings in written and

spoken form.

Module Content

Regular supervision with supervisor and series of supporting lectures to cover choosing a dissertation topic, how to plan your dissertation and dissertation writing.

Methods of Teaching/Learning

The students are expected to work closely with and under the guidance of their MSc dissertation supervisor. Each student has one member of academic staff allocated as supervisor. It is expected that there will be regular meetings between the student and the supervisor.

There will be in addition a small number of formal classes on thesis writing which all students are encouraged to attend. The dissertation coordinator will provide additional support throughout the session to answer any queries on the dissertation process.

Selected Texts/Journals

Essential reading

Zobel, Justin. 2004. *Writing for Computer Science*. London: Springer.

Recommended

Rudestam, Kjell Erik. *Surviving your dissertation: a comprehensive guide to content and process* 2nd ed, London, Sage 2001 0761919619

Locke, Lawrence F. *Proposals that work: a guide for planning dissertations and grant proposals* 4th ed, Thousand Oaks, Calif, London, Sage 2000 0761917063

Glatthorn, Allan A, 1924, *Writing the winning dissertation: a step-by-step guide,* Thousand Oaks, Calif, Corwin Press, 1998 0803966784

Watson, George, 1927, *Writing a thesis: a guide to long essays and dissertations,* London, Longman, 1987 0582494656

APPENDIX B: Staff with Administrative Responsibilities Relevant to MSc

Professor Steve Schneider	**Head of Department**
Dr. Nick Antonopoulos	MSc Programme Director MSc Information Systems Director Chairman, Board of Examiners Chairman, Board of Studies
Dr. Bogdan Vrusias	MSc Programme Director, Internet Computing
Prof. Antony TS Ho	MSc Programme Director, Security Technologies & Applications
Dr. André Gruning	MSc Examinassions Officer
Dr. George Schaathun	MSc Admissions Officer

Academic Staff

Name	Email	Ext	Room	Research Day
Mr Peter AINSLEY (p/t: Tues)	peter.ainsley@virgin.net	2646	27BB02	N/A
Dr Nick ANTONOPOULOS	n.antonopoulos	6052	19BB02	Thursday
Dr Tony BROWNE	a.browne	2629	07BB02	Tuesday
Dr Matthew CASEY	m.casey	9635	15BB02	Friday
Dr Jonathan Y CLARK	j.y.clark	3425	09BB02	Thursday
Dr Lee GILLAM	l.gillam	9633	21BB02	Tuesday
Dr André GRŰNING	a.grüning	2648	14BB02	Friday
Dr James HEATHER	j.heather	9636	05BB02	Friday
Professor Anthony HO	a.ho	2626	28BB02	Friday
Prof Paul KRAUSE	p.krause	9861	32BB02	Friday
Dr Roger M A PEEL	r.peel	9284	11BB02	Friday
Dr Hans Georg SCHAATHUN	h.schaathun	6057	16BB02	Tuesday
Prof Steve SCHNEIDER	s.schneider	9637	30BB02	Friday
Dr H Lilian TANG	h.tang	6054	10BB02	
Dr Helen TREHARNE	h.treharne	3161	13BB02	Friday
Dr Bogdan VRUSIAS	b.vrusias	2261	06BB02	Friday
Prof Ian WELLS (p/t: Tues)	ian.wells@nhs.net	2646	27BB02	N/A

Support Staff

Gary M DEAR (Computing Support)	g.dear	9632	17BB02
Maggie BURTON (Professorial Assistant/Research Secretary)	m.burton	6140	29BB02
Klara KRCOVA (PGT Administrator – MSc Comp)	k.krcova	6050	04AA02
Judy LOWE (PA to Head/Dept Administrator)	j.lowe	6058	29BB02
Jan POINGDESTRE (Exams Administrator)	j.poingdestre	9640	10AA02

APPENDIX C: Academic Misconduct and Plagiarism

An aim of our course is to educate and advise our students at many levels. Technical aspects of the course are most obvious but we also hope to instruct students in the accepted social and ethical standards of a professional engineer. We formally assess students via examinations and coursework. The coursework is intended to help students learn as well as to assess their achievements. With the growth of readily available electronic media and the WWW, we are very concerned when students either copy the work of others or do not acknowledge the contribution of others. This is a form of cheating which both distorts our assessments but also means that the student does not learn and understand the work. In this short document we define what constitutes academic misconduct, state our policy on punishing it and offer some advice on acceptable working practices.

It is unacceptable to the University of Surrey that any student registered with the University or one of its Associated Institutions for an award of the University should cheat in order to gain for him-/herself an academic advantage. The University will penalise any student who is found to have cheated in accordance with its *Regulations for the Conduct of Examinations and Other Forms of Assessment*.

The General Regulations specify that:

> It will be regarded as academic misconduct for any candidate to commit an act whereby he or she seeks to obtain for him- or herself, or for another candidate, an unfair advantage. Academic misconduct shall be taken to include:
>
> (i) impersonation of another candidate or knowingly allowing another candidate to impersonate him/her;
>
> (ii) copying or communicating with another candidate in a formal, timed examination;
>
> (iii) introducing into an examination room (including any anteroom or toilet) and making use of any manuscript or printed material not specifically permitted, any unauthorised calculator or other improper aid or source of information or communication;
>
> (iv) plagiarism* or otherwise misrepresentation of his or her participation in and responsibility for any material submitted for assessment as part of a prescribed assessment;
>
> (v) fabrication of the results of work which he or she claims to have undertaken (for example, experiments, interviews, observations or other forms of empirical research and investigation) which he or she has not carried out as claimed or presentation of results which he or she has not obtained.
>
> * *To plagiarise* is defined as, "to take and use (the thoughts, writings, inventions, etc. of another person) as one's own", (Concise Oxford Dictionary, 8th edition, 1990).

The University subscribes to an electronic plagiarism detection service and reserves the right to submit the work submitted by any student to that service for analysis.

If you are in any doubt about the appropriate procedures for acknowledging and referencing the work of others, you should seek advice from your Personal Tutor/Supervisor or Director of Studies.

The Department has a special software tool that can automatically detect plagiarism.

It is the policy within the Faculty that where any student is found to have committed "academic misconduct" in any piece of examined or assessed work, a Fail mark of 0% will always be awarded for that piece of work. Repeat offences may be punished by failing a student in all modules assessed during the relevant semester.

Plagiarism. While most of the forms of academic misconduct defined above are self-explanatory, some students may be less familiar with the notion of "plagiarism". One dictionary definition is offered in a footnote to the regulations themselves. Other dictionary definitions include:

- "to take and use as one's own the thoughts, writings or inventions or another" (*Oxford English Dictionary*, CD-ROM 1994)
- "to appropriate and pass off (the ideas or words of another) as one's own";
- "to commit literary theft";

- "present as new and original an idea or product derived from an existing source" (*Longman's Dictionary of the English Language*, Harlow: Longman 1984)

In simple terms, therefore, plagiarism involves knowingly making use of someone else's work without acknowledgement, and representing it as your own. It is worth noting several points:

- It does not matter whether or not the work or idea has been published. For instance, using a passage from another student's essay without acknowledgement would be plagiarism. So would using a passage from a published article or book, or from an internet site, or from the study guide for the course.
- Plagiarism takes place when you give the impression that someone else's work is your own, even if the other person has permitted you to do so. For instance, even if a friend allows you to use a passage from their essay, you are plagiarising if you do not acknowledge their work.
- The words and ideas in any piece of writing are the property of the author. Plagiarism *may* therefore also involve specific civil offences, such as breach of copyright.

Avoiding Plagiarism. Plagiarism is a serious offence: how can you avoid it? After all, every piece of writing involves using the ideas of other people. The academic enterprise involves precisely building on, criticising, and evaluating, the work of other people. In many cases, you have to explain what they have said. How can you do this without plagiarising? There are two key rules to follow to avoid plagiarism:

1. Always acknowledge your sources 2. Avoid direct (word-for-word) copying

Acknowledge your Sources. It is *vital* always to acknowledge where an idea, or argument, which you use originates. There are *no* exceptions. Occasionally, you may find yourself in situations which seem to demand an exception. What should you do, for instance, if you wish to draw on writing or material which has been given to you in confidence? Situations like this are, in fact, quite common. The key is to acknowledge the fact that you are using confidential material. It may still be necessary to ensure that the precise origins remain confidential, but you should never give the impression that the work is your own.

Avoiding Copying. As a general rule, direct quotation should be kept to a minimum in academic writing. But there are a few exceptions. Sometimes you may want to use a quotation as the starting point for your own counter-argument. In this situation, direct copying is acceptable. ***But*** in all direct copying it should *always* be very clear that what is copied is being *quoted.* It is *never* permissible to use someone else's words without stating that the words are quotations, and you should always acknowledge where they come from.

By and large, it is preferable to explain (or "paraphrase") other people's arguments in your own words. But remember, even here you must show that you are explaining someone else's argument. If you do not acknowledge the origin and author of an argument you wish to paraphrase, you are plagiarising.
There are several highly acceptable styles of acknowledging your sources in academic writing. You should adopt one, and follow it consistently through any piece of work. A practical approach is to adopt the style of one of the main journals in your field.

Last Updated: August 2006

APPENDIX D: Staying on for a PhD

Anyone interested in going on to a PhD should call at the Faculty Postgraduate Office to collect a blue application form. The Faculty also holds a PhD Opportunities Meeting in the Spring semester which all MSc students are welcome to attend.

Research in the Department of Computing and the Faculty of Engineering and Physical Sciences.

The Department of Computing is part of the 5** Faculty of Engineering and Physical Sciences. The Department is committed to the highest standards of excellence in research, with an international reputation for its research undertaken by three groups, and with a portfolio of projects funded by UK research councils, the European Union and industry. The *Biologically Inspired Modelling and Applications* group provides a focus for research into artificial intelligence techniques inspired by biological systems. The *Formal Methods Group* and *Security Group* focuses on the development and verification of high integrity systems. The Software Systems group focuses on software engineering for the high-volume sector of industry.. The Department has leading-edge computing resources to support its research. These include an Access Grid equipped seminar room, a Grid infrastructure supporting leading-edge distributed technologies, a software testing lab for embedded software, as well as a number of high-performance servers. In 2006 the Department was awarded a SRIF 3 grant for a high performance computing cluster. Other research groups within the Faculty are:

SSC

The Surrey Space Centre under Professor Martin Sweeting is a centre for research and postgraduate teaching, and has responsibility for the teaching of the modules in Satellite Engineering The Centre is unique in the UK in that it has designed, built and operated several small satellites for communications and other purposes over the last ten years. The Centre includes a wide range of expertise in the fields of satellite engineering

CCSR

The Communications Systems Research Centre under Professor Barry Evans has responsibility for the various telecommunications modules. Its areas of interest are the wider telecommunications topics with special interest in Satellite and Mobile communications.

CVSSP

The Centre for Vision, Speech and Signal Processing under Professor Josef Kittler incorporates activities in artificial intelligence, image processing, speech analysis and processing, pattern recognition, computer vision, remote sensing, medical imaging and related topics. It is one of the best Centres of its kind in the country with several of its members enjoying an international reputation.

ATI

The Advanced Technology Institute under Professor Ravi Silva incorporates a wide range of multidisciplinary research expertise in electronics, physics, material science, chemistry and biology. Its research activities are centred around nanotechnology, photonics, ion beams and advanced theory to address the grand challenges in information technology, renewable energy and health care technology which face today's society.

Mathematics

Research in Mathematics focuses on Nonlinear Systems Theory and its applications. It is divided into five interlocking subareas: Dynamical Systems, Geometry and Mechanics, Patterns and Symmetry, Dissipative Partial Differential Equations, and Mathematical Biology.

Applications

Anyone interested in going on to a PhD should call at the Faculty Postgraduate Admissions Office to collect a blue application form.

APPENDIX E: Instructions to Examination Candidates

1 Candidates must wait outside the examination room until told to enter by an invigilator.

2 Candidates must be **silent** when entering or leaving the room during the examination and must not speak to anyone, other than an invigilator, between entering the room and the end of the examination. Any candidate creating a disturbance may be expelled from the examination room.

3 Coats, bags etc. should not normally be taken into the examination room. Candidates with such items who have nowhere to leave such items safely may deposit them at the front or back of the examination room as directed by the invigilators.

4 Candidates must place their University of Surrey Identity Card on the top left-hand corner of the desk in each examination they take.

5 **Candidates may not bring textbooks, notes or similar aids into the examination room** unless this has been specifically authorised for the examination paper concerned. If they are not in a bag, files or notes deposited in the room may be removed and destroyed by the invigilators. **Dictionaries** may only be introduced into the room as specified on the examination paper rubric.

6 **Mobile phones must be switched off and left in bags etc.**

7 Candidates who started their programme of study after August 1998 may use **only** Casio FX115MS, FX115W or FX115S **calculators** in examinations. Candidates who started their programme of study before that date must obey School regulations.

8 Candidates will normally be permitted to **enter up to half an hour after the start** of the examination. A candidate arriving more than half an hour after the start may be admitted at the discretion of the Chief Invigilator.

9 Candidates **may not leave earlier than half an hour after the start** of the examination, **nor may they leave during the last ten minutes** of the examination period.

10 At the end of the examination, candidates must remain seated until the invigilators have collected all the scripts and **candidates are told that they may leave**. It is the candidate's responsibility to ensure that his or her script is handed to the invigilator.

11 A candidate leaving the examination room but intending to return must be accompanied by an invigilator.

12 The attention of candidates is drawn to the section on **academic misconduct** in the "Regulations for the Conduct of Examinations and other forms of Assessment". Academic misconduct includes, but is not limited to, communicating with others, copying from the script of another candidate, introducing unauthorised notes, failing to acknowledge the work of others etc. A candidate who engages in any form of academic misconduct may obtain a mark of zero for the paper, or the whole set of examinations.

13 It is in a candidate's interest that answers are legible. Boards of Examiners may return a mark of zero for illegible scripts or require the paper to be reproduced at the candidate's expense. Only black, blue, or blue-black ink should be used, except where additional colours may be needed in diagrams etc.

14 **All rough work must be carried out in the answer book(s) provided**. Such work should be crossed out to distinguish it from the actual answers to questions. It is an offence to bring into, or remove from, the examination room any part of an answer book.

15 **No food or drink is permitted in the examination room**, except that candidates may consume sweets and plain water provided they do not disturb others and remove any litter at the end of the examination. **Smoking is strictly prohibited**.

Made by Senate: *17 February 1987*

Revised: *9 November 199, 20 June 1995, 11 June 1997, 19 May 1998, 21 June 2002, 1 July 2003, 11 May 2004*

APPENDIX F: MITIGATING CIRCUMSTANCES GUIDANCE

Introduction
Assessment is an integral part of the teaching and learning experience in higher education. Occasionally, for good reason, you may be prevented from undertaking or completing an assessment at the appropriate time. To ensure consistent and fair practice across the University and to improve understanding, the University has prepared the following guidance on what Facultys, their Boards of Examiners and the Student Progress and Assessment Boards understand by acceptable "mitigating circumstances". Your attention is also drawn to the Health Centres' web pages, at:
http://portal.surrey.ac.uk/portal/page?_pageid=705,1476719&_dad=portal&_schema=PORTAL

Principles
Consideration by Boards of Examiners of claims for mitigating or extenuating circumstances are founded on the following principles:

- that students are ordinarily expected to meet all deadlines for coursework and to attend all examinations, as prescribed in the Programme Regulations, and to make a 'reasonable attempt' to answer examination questions, coursework assignments or other modes of assessment;
- that it is the students' responsibility to notify the Head of Faculty, in writing and in advance (where possible), of any mitigating circumstances they would like the Board of Examiners to take into consideration;
- that information provided by students in support of such claims shall be regarded as confidential;
- that penalties may be incurred by late- or non-submission of coursework by the due deadline or by failure to attend and attempt a prescribed examination.

Mitigating Circumstances
Not all 'circumstances' warrant the same consideration. Some are clearly beyond the reasonable control of students and some are not. The examples given below are not exhaustive but will serve as a guide to what Boards of Examiners will regard as acceptable 'mitigating circumstances' when making academic judgements:
Examples of circumstances beyond the reasonable control of the student:

- bereavement involving a close relative or friend
- serious accident or illness requiring hospitalisation
- serious infectious disease
- burglary and theft (*to be accompanied by a crime report*)
- childbirth.

Examples of situations which may be considered beyond the reasonable control of the student:

- medical operation (*if approved prior to the point of assessment* ***or*** *an emergency*)
- hospital tests (*if approved prior to the point of assessment*)
- being taken ill during an examination
- significant accident, injury, acute ailment or condition
- attending a wedding (of sibling, relative, friend) (*for examination only*);
- private or public transport failure leading to delays of more than 1 hour (*corroborative evidence is required to verify such a delay*)
- bankruptcy.

Examples of circumstances that would NOT ordinarily be considered mitigating circumstances:

- accidents to friend or relatives (*unless within 3 days prior to deadline or examination or where student is sole carer*)
- family illness (*except in an emergency or where the student is the sole carer*)
- examination nerves
- feeling generally anxious, depressed or stressed (*unless medically certificated and notified in advance i.e. at least 2 weeks*)
- clash with paid employment
- minor accidents or injuries
- pregnancy
- cold, cough, upper respiratory tract infection, throat infection, unspecified viral infection
- childcare problems that could have been anticipated
- domestic problems (*unless supported by independent evidence*)
- mistaking the deadline, or time management problems (including alarm not going off)
- private or public transport failure leading to delays of less than 1 hour
- general financial problems
- legal problems (*unless required to attend Court on the day of an examination or assessment*)
- holidays or booked travel arrangements
- house moves
- notes burned or stolen (*unless supported by a fire or police report*)
- intermittent or last minute computing equipment problems (discs, machines, printers, viruses)
- handing-in problems
- inclement weather (*unless exceptional/severe conditions*)
- ignorance of the Regulations or examination/assessment arrangement.

Reasonable Attempt

Students will be judged to have made a 'reasonable attempt' at coursework or written examination, when, in the view of the examiners, the task has been approached seriously and failure is principally the consequence of genuine academic and intellectual weakness, rather than token effort and insincere commitment. Token submission of coursework or attendance at examination, intended to 'buy time' to make up for poor time management will not be accepted.

Examples of 'reasonable attempt' in coursework

- shows some evidence of appropriate preparation, especially reading
- is at, or close to, the stipulated length
- is supported by satisfactory attendance record
- broadly follows required formal guidelines with satisfactory presentation

Examples of 'reasonable attempt' in examination

- is of sufficient length to indicate that the student has been writing for most of the examination period
- shows that effort has been put into the answer while unintentionally missing the point of the question
- shows evidence of appropriate preparation, especially reading
- is supported by satisfactory attendance record.

If you feel your circumstances warrant consideration by the Board of Examiners you should notify the Head of Faculty, in writing, in advance, at the earliest opportunity (within 7 days of the assessment deadline or examination). Your letter should state whether the circumstances relate to non-attendance at an examination or late submission of an assignment. You should include supporting evidence (e.g. a medical certificate giving the nature and duration of any illness). You may inform your personal tutor, in confidence, of any problem you may not wish to disclose in writing. You should complete any late or non-submission forms your programme or Faculty/Department requires. If you discover subsequently that there are circumstances you could not report in advance, you should inform the Head of Faculty, in writing, as soon as possible.

Examples of acceptable documentary evidence

- letter from parent, or copy of death certificate, confirming bereavement
- letter from lawyer, hospital, GP or University Health Centre*

Examples of non-acceptable documentary evidence

- self-certification of illness*
- letter written by a friend or acquaintance.

* *Please note that the University Health Centre will not "ratify" or "certify" illnesses which are reported retrospectively. Students who believe that their performance in an assessment, or ability to attend, might be affected by illness* ***must*** *contact the Health Centre* ***during the period of illness*** *in order that an appropriate supporting document can be provided for the Head of Faculty [General Regulations 5.10-5.11(undergraduate) and 4.15-4.16 (postgraduate) refer].*