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Introduction

Welcome to the School of Mathematics!

The purpose of this section of the handbook is to collect together useful information about the school and the University for graduate students in mathematics. The handbook contains important practical information with which the School of Mathematics will assume that you are familiar. Although every effort is made to ensure that this information will be accurate, changes do occur over time. Updates will be added to the School of Mathematics website or emailed to your university email address where appropriate.

The following members of the University have particular responsibilities in respect of graduate students and you are encouraged to consult them if you need further information or have any problems you want to discuss at any time during the year.

Key Dates for 2014-15

Welcome to the School Party: 3 October 2014 5pm The Atrium Bridge

First Semester: 15 September 2014 – 25 January 2015

Christmas Break: 12 December 2014 – 12 January 2015

First Semester Mitigating Circumstances Deadline: 30 January 2014

First Semester Examinations: 12 January 2015 – 23 January 2015

Second Semester Mitigating Circumstances Deadline: 5 June 2014


Easter Break: 20 March 2015 – 13 April 2015


Referred/Deferred Examinations: 24 August – 4 September 2015

Referred/Deferred Examinations Mitigating Circumstances Deadline: 1 September 2015

MSc Dissertation Submission: 4 September 2015

Dissertation Submission Mitigating Circumstances Deadline: 15 September 2015

Week 6 of Semester 1 is designated as a reading week. For MSc courses there are usually no lectures during Reading Week but there may be coursework or in-class tests.

Week 12 of Semester 2 is designated as a revision week, when classes are held as normal but will normally be devoted to revision.

In your studies you are expected to refer to text-books and other reference books and read beyond the material which has been explicitly covered in the lectures in order to obtain a deeper appreciation of the subject.
Registration

- **September Registration 2014**

Registration is open from 1 September.

You should make every effort to complete registration online before you arrive at the University so that all you need to do when you get here is collect your student card.

If you are unable to complete registration online or are having difficulty in completing the process please contact the Student Services Centre on +44 (0)161 275 5000 (option 4) or attend and complete registration at the Student Services Centre on Burlington Street or at the Student Services Centre desk in the Joule Library.

You will receive an email inviting you to complete IT sign up. This will allow you to confirm your attendance and will also give you access to our extensive IT facilities, including your own University email account.

**If you are a new international student**

On your arrival at the University, you must go to the Student Services Centre with your passport and visa to allow them to take a copy of the documents as required by the UKVI.

- **Register as a student**

For full details of the registration process, please see http://www.studentnet.manchester.ac.uk/crucial-guide/academic-life/registration/

Remember: you can register, at your own pace and at a convenient time, between 2nd September and the deadline of 30th September. Please be aware that if you do not complete registration by this date, you will be liable for a late payment charge of £50. Failure to complete registration by the 31st October 2014 will result in the late charge increasing to £200.

If you have a query about registration please contact the Student Services Centre on:

Tel: +44 (0)161 275 5000, option 4
email: ssc@manchester.ac.uk

- **Swipe card**

You will be required to collect your University swipe card (student card) after completing your online registration. International students (i.e., non-EU/EEA passport holders) will need to have their passport and their UK identity card, if it has been issued, available for copying when they attend the Student Services Centre to collect their swipe card. International students who do not have these documents with them will not be issued with a swipe card.

You can find a list of venues issuing student cards at http://www.studentnet.manchester.ac.uk/crucial-guide/academic-life/registration/registration-process/student-card-collection/

- **Tuition Fees**

Information regarding tuition fees is available from the Student Services centre, and also online at http://www.campus.manchester.ac.uk/ssc/ tuitionfees/
• Important information for students funded through the school only (EPSRC DTA, CASE Awards, School Scholarships)

• Tuition Fees
If you were notified of a funding award, the School of Mathematics will be making arrangements to pay your tuition fees. Please contact mathematics@manchester.ac.uk immediately if you have any problems with your funding from the School.

• Maintenance Allowance
If you were awarded a stipend to cover the cost of your maintenance, you will be paid at the beginning of each month by direct debit into your personal bank account starting from October. **PLEASE MAKE SURE THAT YOU ENTER YOUR BANK ACCOUNT DETAILS ONTO THE SYSTEM AT THE TIME OF YOUR REGISTRATION**

If you don’t provide your bank account details on time, you may miss your first maintenance payment. Therefore it is important to complete your bank account details as soon as possible. Once you have completed your bank account details any outstanding maintenance payments will be transferred into your account.

If you are expecting to receive an award from the University of Manchester make sure you have entered your bank account details into the student system so that we can pay you.

Make sure you are logged in to My Manchester using your central username and password - e.g mfbxiskv - which you were given when you signed up for your IT account.

Go to the 'My Services' Tab and click the 'Student System' link

Click Campus Finances and then View Financial Aid and click on the green button to enter your bank details.

Note: If you cannot see this green button, this means that we already have bank details on record for you.

If you wish to change your bank account details, please visit the Student Services Centre during opening hours to complete the appropriate paperwork.

• Welcome week
Each programme has an induction period at the beginning of the academic year. During this period there is a wide range of activities arranged to help you with the programme, your studies and your life at University, here in Manchester and in the UK.

In the School of Mathematics at the beginning of the academic year, there is an introduction to the School, to university facilities, to staff and your fellow students, and courses on the use of various computer packages, the list of courses relevant for you is in your pack.

In addition to School activities, the University and the Students' Union have a range of introductory events, including the Societies Fair, where you may choose from an enormous list of activities, from Fencing to Mountaineering, from Dance to Films, Chess to Bell-ringing, from Political and Religious Groups, to Charities and Hobbies.

• International (non-EU) Students
Students requiring specialist tutorial assistance and welfare arrangements should contact International Advice Team, Student Services Centre, Burlington Street (275 5000).
For non-native English speakers, we strongly recommend attendance at the university in-sessional English language support classes. Please see [http://www.langcent.manchester.ac.uk/english/academicsupport/](http://www.langcent.manchester.ac.uk/english/academicsupport/) for further information.

Students from outside the UK may wish to take part in the activities of the International Society, including their Welcome Service. See the website at [http://www.internationalsociety.org.uk](http://www.internationalsociety.org.uk). Other help for International (non-EU) students is available from the University's International Advice Team [http://www.studentnet.manchester.ac.uk/crucial-guide/academic-life/immigration/](http://www.studentnet.manchester.ac.uk/crucial-guide/academic-life/immigration/)

- **Tier 4 Audit for International Students**

  The audit is a requirement of the UKVI and the university is obliged to hold this 4 times per year. You must attend the audit when required or the university will have no option but to inform the UKVI which could have serious implications for your visa and your ability to continue your studies with us.

  Under Tier 4 you are required to maintain an up to date UK address. You must therefore ensure that you have a valid local address registered in our student system under your TERM TIME ADDRESS at all times.

  Under Tier 4 you are obligated to inform the school when you return to your home country or leave the UK. You must inform the school (via e-mail) when you plan to leave the UK and your return dates. We can then inform UKVI of your authorised absence if contacted by immigration.

  Your audit may take the form of a face to face meeting with administrative or academic staff, or it could take another form (eg registration card collection, monitored attendance at seminars, attendance at examination). You will be send an e-mail notifying you of audit points and be given documentary confirmation that you have been that you have been included in the census at each audit point.
Facilities

- Email

You should quickly become familiar with the electronic mail (email) system because all important information is sent in this way, and it will be assumed that you read email sent to your university email address on a regular basis.

You will receive an email from the University IT Services with your University email address and log-in details prior to your registration. In Mathematics you will also have a school UNIX account which you may wish to link to your main university account.

The IT Services Division provides most of the campus IT services for staff and students of the University of Manchester. For information on how to get started, help and support please visit their website at: http://www.itservices.manchester.ac.uk/

The School of Mathematics also maintains its own Unix-based network providing access to various specialist mathematical packages. There is an introductory class on this during the first week of Semester 1, and all students are strongly recommended to attend.

Blackboard: We will make extensive use of eLearning environments. We expect that you are, after induction week, able to use them to access course material and communicate with your colleagues.

- Library sites

The library service is provided through a range of different types of library, as well as over the web. The Main Library (covering nearly all subject areas), The Joule Library (engineering and physical sciences) and The Eddie Davies Library (postgraduate studies in business and management) hold the core working collections. They are supported by a number of smaller, specialised libraries across the campus, most of which duplicate material held in the core libraries.

- The University of Manchester Library

http://www.library.manchester.ac.uk/

The ID card with which you are issued when you register also acts as a library card (swipe card) to gain access to the main university library. A tour of the library and its facilities is usually organised in September and if you are a new student it is important that you attend this.

Books from the main library can be borrowed for 4 weeks. There is also a Short Loan section for the most popular books which can be kept for a limited period. Overdue books incur heavy fines and students may not be awarded a degree, diploma or certificate, unless all books borrowed from the university library have been returned and any fines paid.
• Joule Library

There are five self-service photocopiers and one microfiche/microfilm reader in the Joule Library, located in a room on the Main Level (E Floor). A Technician is on hand during the day if you have any questions about using the copiers.

The Joule Library provides access to 55 networked PCs with CD rewriters and to networked printing facilities.

• Careers Service

The careers service offer many services including Interview preparation:

Students may book a career guidance appointment to discuss interview technique, concerns, feedback from previous interviews and practice some basic questions at any time. Subject to availability but not restricted in number.

Duty advice – Most days a limited number of 15-minute appointments are available for booking on the day. These are often used for last-minute interview preparation.

Students can get brief interview assistance from the careers information team in the Atrium at any time, by phone or in person.

Interview workshops and employer-led lectures delivered via our programme of events throughout the year.

Detailed interview section of the website, including downloadable guides and videos, plus interview resources in the Atrium.

Employer-led practice or mock interviews – a 1:1 pre-booked session with an employer who will run through some basic interview questions to help students prepare and practice technique. Subject to employer interest in delivery.

http://www.careers.manchester.ac.uk/postgraduates/

• Out of Hours access

Taught postgraduate students have access to the Alan Turing Building out of hours via the swipe card access.

• School Workroom

Taught postgraduate students have access to computers and hot-desking facilities in the Brian Hartley Room, 1.211.

• Photocopying

Photocopiers are available in all of the library buildings.

• Telephone Calls

Postgraduate student phones in the Alan Turing Building are for internal calls only.
• Tea and Coffee

There are vending machines and a snack-bar in the Alan Turing Building on the ground floor.

• On Completion of Your Programme

When you leave the School of Mathematics on completion of your programme of study, out of consideration for other students please remove all your property from the building. Any unclaimed property, which is left behind will be assumed to be unneeded and may be disposed of after two weeks. The school has no provision for storage, and your cooperation in maintaining a tidy environment will be much appreciated.
Programme Management

Each programme is run on a day-to-day basis by your Programme Director. The Teaching Committee oversees management of the MSc programmes. The principal functions are to determine and monitor the academic content of the programme, to admit and examine students and to monitor student progress and to decide on policy and planning.

Student involvement in programme management is possible in three ways: through election of representatives to carry your concerns to the PGSSLC (Postgraduate Staff-Student Liaison Committee) which meets four times a year, typically in October, February April and June; via feedback meetings with the Programme Directors, and through Course Evaluation Questionnaires, which are consulted and acted on.

We encourage you to raise problems immediately as the programme management may not be aware of difficulties. Queries or comments about individual course units should be addressed in the first instance to course unit lecturers.

The Programme Directors operate an open door policy for genuine problems of either an academic or personal nature.

External examiners are appointed to monitor the standards of our teaching and assessment. During the year they review coursework and examination papers and provide critical advice of these which we are obliged to take into account. Following the second semester examinations, they attend the University and scrutinise the written papers and coursework of students, submitting a report to the University on our conduct of the whole student assessment. They also examine the Masters dissertations and moderate marking.

- Your Academic Advisor

Your academic advisor is there to take a direct interest in your academic progress and general welfare. Your progress will be followed through informal meetings and records of your marks.

Lecturers are responsible for each of the taught course units. They will give lectures, run examples classes, and will be responsible for setting and processing your coursework and examinations.

- Your Programme Director

The programme director is responsible for the overall running of your programme of studies.

MSc in Actuarial Science: Dr Kees Van Schaik ext. 55853 Rm 2.142 kees.vanschaik@manchester.ac.uk

MSc in Applied Mathematics: Dr Will Parnell ext. 55908 Rm 2.238 william.parnell@manchester.ac.uk

MSc in Mathematical Finance:
  Semester 1 Prof Goran Peskir ext. 63215 Rm 2.240 goran.peskir@manchester.ac.uk
  Semester 2 Dr Jonathan Bagley ext. 63662 Rm 2.139 jonathan.bagley@manchester.ac.uk

MSc in Pure Mathematics & Mathematical Logic: Dr Marcus Tressl ext. 63672 Rm 2.118 marcus.tressl@manchester.ac.uk

MSc in Statistics: Dr Peter Foster ext. 55915 Rm 2.229 peter.foster@manchester.ac.uk
• **The Supervisor of your dissertation/report**

Your supervisor is responsible for your progress on your dissertation (for M.Sc. students) or report (for Diploma students). Supervisors will be allocated in Semester 2; your Programme Director will circulate details nearer the time.

• **PG Office**

The Postgraduate Administrator: Anna Bigland (ext. 50176)

Anna will be able to offer support and advice on administrative matters relating to your programme. They are located in the Postgraduate Office, behind reception on the ground floor of the Alan Turing Building.

• **The Director of Postgraduate Studies in Mathematics:**

Dr Charles Walkden (ext. 55805)

• **The Head of the School of Mathematics:**

Prof Peter Duck (ext. 55831)

• **The Associate Dean of Teaching and Learning in the Faculty of Engineering and Physical Sciences:**

Prof Danielle George (ext. 64796)

• **Vice-President and Dean of the Faculty of Engineering and Physical Sciences:**

TBC (ext. 69111)

Under most normal circumstances the people described above should be able to resolve any problems you may have.

A list of staff members in the School of Mathematics, with their room numbers, phone numbers and email addresses is available on the school website [www.manchester.ac.uk/maths](http://www.manchester.ac.uk/maths)
Student Representation and Feedback

- **Questionnaires**

  The School values feedback from students very highly. Near the end of each semester and in week 3 you will be asked to complete a questionnaire about each course you have taken. You will be asked to evaluate the course content and the standard of teaching. Your feedback will be acted upon. It is important that you complete the questionnaires as they will help the School ensure that the courses are of high quality.

- **PTES**

  The Postgraduate Taught Student Survey (PTES) is an annual survey of over 58,679 taught students across the UK. The School encourages students to take part in this influential survey and make their opinions heard. The survey only takes a few minutes to complete and runs from Easter each year. Feedback from students to the PTES is important as the results are used by Universities, Colleges and Students’ Unions to identify areas for improvement. By completing the survey you will be helping future students who are thinking of applying, and contributing to improvements. The students’ individual responses to the survey are kept strictly confidential, and all responses are anonymous to ensure individuals cannot be identified from the results.

- **Committees**

  The main forum in the School is the School Board. It meets up to five times per year. Postgraduate students have elected representatives on the Board.

  The Postgraduate Staff-Student Liaison Committee is a subcommittee of the Board which has postgraduate representative.

  It deals with matters relating to both taught and research graduate students in the School, rectifying where possible any defects in organisation or other arrangements made for students; identifying problems not immediately soluble and passing these, with recommendations for action to the relevant person or committee. Students can raise problems or grievances and ask advice or liaise with staff.

  The opinion of postgraduate students is sought on other matters of relevance, such as computing facilities and their use.

- **Advice outside the School (in case of problems)**

  In the first instance, you are strongly recommended to take up all academic or personal problems with your Supervisor or Adviser or with your Programme Director for your group or the Director of Postgraduate Studies.
Your Programme of Study

- Work and Attendance of Taught Postgraduate Students in the School of Mathematics

Taught postgraduate students (i.e. those on MSc, PG Dip and PG Cert programmes) in the School of Mathematics are normally required to attend **ALL** lectures, tutorials and support classes, workshops, seminars and computing laboratories and supervisory meetings held in connection with the programme on which they are studying.

Absences supported by medical or other appropriate information will not normally be counted towards the assessment of unsatisfactory attendance.

Taught postgraduates of the School of Mathematics are also expected to sit **ALL** examinations and coursework tests for their degree programme and to submit **ALL** coursework assignments by the deadline specified. Any absences should be supported by a Self-Certification Form or a Mitigating Circumstances Form with supporting evidence.

In the case of persistent unsatisfactory work and attendance the following action will be applied:

- First formal warning letter stating the actions the student is required to take in order to improve their attendance.
- Second formal warning letter stating that unless the student complies with the actions specified, a decision may be taken to refuse the student permission to take examinations or assessments, with the consequence that the student may be excluded from the programme. The student will be expected to meet with the postgraduate administrator and their programme director to discuss their absence.
- Final warning letter stating unless the student takes action stated in the second warning letter within 2 weeks of receipt the student will be withdrawn from the University.*
- Students who are absent from a continuous period of 30 days or miss an entire end-of-semester set of examinations without good reason will be assumed to have withdrawn. Students will be notified of a withdrawal date and will be withdrawn from the University.*

*Students studying under a Tier 4 visa permission should note that once a withdrawal has been completed on the University’s Student System, students will be reported to the UKVI and will be required to leave the UK within 60 days of their withdrawal date.

Further information about work and attendance of students is given in Regulation XX – Work and Attendance of Students, which is available from the following website:


- Attendance Requirements

All grant-awarding bodies require, for continuation of the grant, that the school confirms periodically that a student's attendance and progress are satisfactory. The School also needs to provide a report to UKVI on attendance and progression of students who entered the UK under Tier 4 of the points-based system. **We can only do this if your attendance meets the guidelines set out below.**

In general, you are expected to be in attendance outside normal semester time. **You must** agree acceptable times for holidays with your supervisor and Programme Director. If you wish to undertake holiday during your time in Manchester please complete the holiday form available from:
On taught M.Sc. courses it is expected that all lectures will be attended, although it is realised that there are sometimes unavoidable reasons for absence. **It is your responsibility to make sure that the school is informed immediately in cases of absence (e.g. through illness) and to inform the Postgraduate Office, of any changes in addresses.** All coursework deadlines must be strictly adhered to, except in cases of illness or other reasons agreed with the appropriate member of staff.

To satisfy the attendance requirements you must attend all specified classes and see your supervisor regularly, although these conditions can be varied by agreement between yourself and your supervisor.

Persistent unsatisfactory attendance creates difficulties for all concerned. You are encouraged at all times to make known to your supervisor or the Programme Director any difficulties with the course, or personal problems you may have. Confidentiality will be ensured and you can be sure of a sympathetic response and practical help or advice.
Modes of Study

- **Course Units and Credits**

  Each course unit (or lecture course) is worth a certain number of credits (usually 15, sometimes 30). To obtain the MSc Degree, students normally need to take course units worth 180 credits in total (120 for the diploma). This includes the dissertation which is worth either 90 or 60 credits depending upon the programme.

  Codes for Mathematics taught course units consist of the letters MATH followed by five digits. The first indicates the level of the course unit. In general, a level of 6 corresponds to an MSc unit. The fifth digit denotes the semester in which the course unit is offered: 1 indicates a First Semester course unit, 2 indicates a Second Semester course unit and 0 indicates a full-year course unit.

- **Course Unit Selection**

  [http://www.studentnet.manchester.ac.uk/selfservice/course-unit-selection/](http://www.studentnet.manchester.ac.uk/selfservice/course-unit-selection/)

  Course unit selection will be available as a self-service facility for students from 16th September. Before registering for courses, you must first check with your Programme Director for approval. The self-service course unit selection will close two weeks after the start of teaching for the first semester courses and for full-year courses. It will remain open for second semester courses until the cut-off point two weeks after the start of the second semester. You should already be enrolled onto your mandatory course units.

- **Lectures**

  The main method of teaching used by the School of Mathematics is the formal lecture. Lectures usually start on the hour and are of 50 minutes duration. In a lecture, the lecturer presents the subject orally and usually writes notes or gives a power-point presentation or makes use of the overhead projector. You will need to listen, think and take notes.

  Your ability to take concise notes is dependent on your ability to listen. Listening needs to be more analytical than is often realised. You need to think at the same time as you listen, so that you develop the ability to recognise what is likely to be important and what is not.

  You must make sure that you write down at least everything that the lecturer writes on the board. However, what the lecturer is saying is heard only once; you do not have much time to decide what part of it to write down. A balance must be achieved between taking no notes of the spoken word and trying to make a word-for-word transcript.

  When you don't understand the lecturer, don't panic. Keep taking notes and seek help as soon as possible from the lecturer, your tutor or supervisor, and other students. Don't be afraid to ask questions during or at the end of the lecture. Usually other students don't understand either and will admire your courage. Like everybody else, lecturers occasionally make mistakes, so do point these out as soon as you spot them. Remember, too, that you can only master concepts if you keep working at them, by reading textbooks and doing problems. Aim to make a set of neatly set out, coherent notes during the lecture. Some people prefer to make rough notes during the lecture and rewrite them afterwards but very few can keep this up for long.

  Moreover, the time after the lecture can be spent more profitably. Notes should be well spaced so that you can read them through and amplify them as a result of further work. You will need to use your notes for revision later in the year, so it is well worth spending a little time after each lecture making sure that your notes are legible and that you can understand them. It is very important that you have a complete set of notes for each course unit.

  When reading and amplifying your lecture notes, you should identify the key material (for example, concepts, theorems, applications of theorems, counter examples, techniques), be clear about their role and the way they are
used. Look for examples in your notes, textbooks, examples sheets and past examination papers, and add these references to your notes. The syllabus (course unit description) will often clarify the structure of the course unit. If you are having difficulty with the lecture content, do go to see your lecturer. Do this as soon as possible. Otherwise you will fall behind and will have several poorly understood lectures to sort out. It will be easier for your lecturer to help if you can be precise about your difficulty. Take your notes with you and mark the relevant places, with a concise note of your exact difficulty. Sometimes a change of topic in lectures will give you a fresh start, but don't put off sorting out your difficulties.

If you need help from a lecturer (perhaps because you are having difficulty with the lecture content) try to seek help in an examples class. Otherwise, you should speak to the lecturer at the end of a lecture, or contact him or her by e-mail or telephone to arrange a meeting.

If you find that a course unit causes considerable difficulties not only to you but also to many other students, then you should first approach the lecturer concerned (either individually or collectively) and discuss the problem with him/her. If the problem persists then you should approach your Programme Director, who will discuss the problem with the lecturer concerned and other members of staff.

In lectures, students are asked to behave with courtesy and consideration for other students and for the lecturer. Please do not chat to your neighbour during lectures, as this will disturb the concentration of other students and may even distract the lecturer. Students who disrupt lectures persistently will be reported to the Head of School.

Syllabuses (course unit descriptions) for all Mathematics course units may be found at the website: http://www.maths.manchester.ac.uk/study/postgraduate/information-for-current-students/ (Click on Postgraduate taught course units.)

The syllabus page for each course unit contains a link to the online course material. The nature of the online course material varies from course unit to course unit, but it may include lecture notes, examples sheets and solutions, and past examination papers. Online course material can also be obtained via the Blackboard Learning System. Blackboard is a web-based system that complements and builds upon traditional learning methods used at the University of Manchester. By using the Blackboard system, you can view course materials and learning resources. The software also provides tools for communicating with your lecturer or other students about the course unit, using discussions, chat or e-mail. You can find more information about Blackboard at the website: http://www.studentnet.manchester.ac.uk/blackboard/

- Examples Classes

Each course unit normally has a number of examples classes or feedback tutorials associated with it. Feedback tutorials are usually of 50 minutes duration and start on the hour. Lecturers hand out examples sheets to students on a regular basis. In a feedback tutorial, the lecturer goes round the class, helping students individually with any problems they may be having with the questions on the examples sheets or with the lecture material. The lecturer may also work through some of the questions on the blackboard.

It is important that you attempt as many questions as possible from the examples sheet before the examples class. This will enable you to find out what your difficulties are, so that you can make optimum use of the time in the feedback tutorial to ask questions and get help. Discussions with peers will also be helpful in such matters.

Make sure you take all relevant notes, paper and pen to the feedback tutorial. Don't be afraid to ask questions, no matter how trivial they may seem. When model solutions to questions on the examples sheets are provided by the lecturer, do make use of them. Compare your solutions with those given. Sometimes you may learn more from a model solution to a problem for which you have found a correct solution than you will from solutions to problems which have baffled you.

Students are expected to attend all lectures and examples classes.
• **Graduate Courses, Seminars**

Graduate students are normally expected to attend all the seminars of their research groups. It is appreciated that seminars may not appear relevant to one's work, or in many cases they may be hard to follow, but nevertheless seminars provide a useful focus of research activity and give staff/students an opportunity to learn about work being done in other areas. Details of seminars and graduate courses on offer will be circulated separately and are available from the School of Mathematics’ website at [http://www.mims.manchester.ac.uk/events/seminars/index.html](http://www.mims.manchester.ac.uk/events/seminars/index.html)

• **Private Study**

As a rough guide you should be spending approximately twice the number of instruction hours in private study, mainly working through the examples sheets and reading your lecture notes and the recommended text books. You may study for several hours at a time, or make use of short periods of time. It is easy to fritter away twenty-minute or half-hour periods but over a week they can amount to several hours lost, so try not to waste those valuable twenty-minute periods. The odd hours between lectures and feedback tutorials are particularly valuable, as resources (such as members of staff, the library and other students) are available for consultation.
Assessment - Coursework

Some Mathematics course units have a coursework element, which counts towards the assessment of the course unit. Typically, the coursework counts for about 20% of the total marks available for the course unit, but some course units are assessed entirely by coursework while others are assessed entirely by examination. The coursework can take various forms. It can consist of a short test during the Semester, it may take the form of an assessed computer practical or a project or you may be asked to work through a question sheet in your own time and hand in your solutions. Full details will be provided by the lecturers for the course units.

Handing in work is most important, whether for assessed or un-assessed coursework. It is the only way you will find out whether your ideas are right, whether you have understood the problem correctly and whether your solutions are correct (even if the final answers look right). You should also pay close attention to comments on your work.

When coursework or project work is asked for by a given date, this must be adhered to. For the School of Mathematics, unless there are mitigating circumstances, students will normally lose 20% of the marks awarded to them for the coursework (or project work) for each weekday late that the work was submitted. Thus, work submitted one week late will receive no marks.

Students may be given permission to submit work late if there are Mitigating Circumstances but this would need to be authorised in due course by the Mitigating Circumstances Panel. You should apply for an extension by submitting a School of Mathematics Mitigating Circumstances Form and you should apply before the deadline whenever possible. Applications submitted after the deadline must have a good reason for not being submitted before the deadline. Should you be unable to submit coursework (or project work) as a result of illness or any other acceptable cause, you should see the lecturer or supervisor concerned and your Programme Director. You should also obtain a doctor's note (whenever possible) and complete a School of Mathematics Mitigating Circumstances Form, available online from http://www.maths.manchester.ac.uk/study/postgraduate/information-for-current-students/student-support.

If you miss a coursework test, then you must obtain a doctor's note (whenever possible) and complete a School of Mathematics Mitigating Circumstances Form, available online from http://www.maths.manchester.ac.uk/study/postgraduate/information-for-current-students/student-support/ Your case will then be considered by the appropriate Mitigating Circumstances Panel, which will decide what action to take (if any).

- Coursework Submission and Penalties

Coursework that requires hard-copy submission must be submitted to the Teaching and Learning Office Main Reception in the Alan Turing building. Submission forms are available and you will be given a receipt by the receptionist.

- Deadlines for coursework/dissertation/project and rules for late submission.

The deadline for submission is 4pm on the day the work is due.

Normally each piece of coursework that has not been handed in by the deadline has the mark awarded by 20% per working day and deadline extensions are only given on the basis of mitigating circumstances. If you do not submit your dissertation/project by the deadline then you will automatically be given a mark of 0. If you submit your dissertation after the submission deadline then it will be treated as a resubmission and the mark will be capped at 40%.

- Return of coursework
Your coursework will normally be returned within 10 working days via reception or in lectures.

- **Coursework Offences**

http://www.studentnet.manchester.ac.uk/crucial-guide/academic-life/formal-procedures/conduct-and-discipline/

The school and the university take plagiarism very seriously and you must ensure that you understand what plagiarism is and that you understand the penalties involved. The School and University will take action in all cases where coursework offences have been detected and ignorance of the regulations will not be taken as an acceptable defence. You should also note that you have a responsibility to ensure the originality of your own work (i.e. you should not give other students a chance to copy your work). Students whose work has been made available to be copied will normally be subject to the same penalties as those applied to students who copied.

There are four types of offences:

**Copying and Collusion:** This occurs when two or more students submit the substantially same piece of coursework in whole or part. This may be from the same electronic source (e.g. a word-processed document or a program listing) or when the same material is presented in a different way.

You should be aware that material that derives from the same source but which has been changed to make the submissions appear less similar will be considered to be a breach of regulations. This type of offence can occur when students have worked together as a group or where one student has copied from another. Irrespective of how the breach of regulations has occurred all of the students involved will be penalised in the same way. So, for example, if you have your work copied by another student, then you will be punished in the same way as the person who did the copying. This imposes significant responsibilities on students to ensure the integrity of their own coursework. You should ensure that:

- You do not leave work on printers.
- You do not give passwords to other students.
- You do not allow other students to use your home computer without taking adequate precautions.
- You do not show your coursework to other students.

These issues are very important. There have been a number of cases in recent years where a student has lent his/her coursework to another student in order to help the other student understand the exercise. After submission the originator has found that the other student has copied his/her coursework. In other cases, students who have shared home computers have found that other students have submitted their coursework.

If you believe that another student has gained access to your coursework, you should inform your Programme Director as soon as possible.

It is vitally important that when you discuss coursework with others you do so in very general terms and are not so specific that it leads to the same piece of coursework being submitted. The school will use whatever means it sees fit to test coursework for breaches of this regulation. This may include the use of software such as Turnitin that checks submissions against each other. The school reserves the right to insist on electronic submission in specified formats.

**Copying from another source:** This case occurs when you submit work from another source as if it were your own work. The other work may be copied from textbooks, academic papers, Internet resources, and the submission of other students in previous years. You should be very careful that you correctly reference the work of others. Failure to adequately reference the work of others will be deemed to be a breach of this regulation.
Repeated Submission: You may submit an item of coursework for assessment on only one occasion (apart from in exceptional circumstances – see below). Where you submit the same piece of coursework for multiple assessments, it will be deemed that you have copied from another source.

Fabrication of results: This occurs when you claim results that you have not actually obtained.

Penalties for Submission of Improper Coursework will be applied in line with University policy. (see Appendix 1)

- What is Turnitin?

Turnitin is a piece of software that is used by the University to help to identify plagiarised work. It allows you to submit your work via your Blackboard course, where an originality report will be generated. This report will highlight text in your submission that matches text from one or more of the following:

- other students at the University of Manchester
- students at other institutions
- academic publications
- internet sources

These reports are examined as a standard part of the assessment process. Submissions to Turnitin are made anonymously. When your work is submitted to Turnitin it will normally be added to an international database of student papers. Other students’ work will then be compared to your work from that point onwards. If your submission is confidential, your tutor can ensure that it is not added to the database.

Please note: the file size must be less than 20MB, the maximum length of the paper less than 400 pages, and the file types allowed are MS Word, WordPerfect, PostScript, PDF, HTML, RTF and plain text. Unless Powerpoint slides are saved as PDF then they cannot be submitted via Turnitin.
Assessment - Examination

- Mathematics Examinations

It is widely recognised that no assessment system is ideal for all students. Some react badly to the pressure of exams, while others prefer the discipline of a regular exam timetable. Hence, on most Mathematics course units there is a mixture of assessed coursework which is handed in at various times throughout the year and formal end of semester exams in each subject. The two sets of marks are combined to make 100%.

First Semester course units are normally examined in January, while Second Semester course units and full-year course units are normally examined in May/June. Full information about the length of each examination paper, the number of questions on each paper and the number of questions you are expected to answer will be given to you by the lecturers in charge of course units. They will also give you examples of typical examination questions.

Examination papers from previous years are available via the University website:

http://documents.manchester.ac.uk/pastpapers.aspx

If you answer more than the number of questions required in the rubric of an examination paper, it is advisable to cross out the questions that you do not want to be marked. Some examiners will mark all the questions you attempt and count the best ones. Others will only mark the number of questions required by the rubric and will ignore later attempts at other questions. The lecturers will tell you in advance which policy they will adopt and this will be stated on the rubric.

The examination timetables are posted well in advance of the examination periods on the website:

http://www.studentnet.manchester.ac.uk/crucial-guide/academic-life/exams/

You must check the examination timetable in good time. Each student is allocated an individual seat number for each examination and you are required to sit in the seat which has been assigned to you. You can obtain your own individual copy of the timetable from the Student Portal. You can log in to the Student Portal from the website:

https://app.manchester.ac.uk/

The University does not regard failure to read the timetable correctly as an acceptable reason for absence.

- Revision Techniques

Your study plan for the year should include time for revising for the formal examinations, which are held at the end of each Semester. Revision is not a substitute for steady, hard work while course units are in progress. The revision period before examinations is a time for re-familiarising yourself with ideas which may have been crowded out by more recent work, rather than trying to understand new work. The best way to memorise mathematics is by familiarity through regular use. Some formulae, however, will be hard to remember and these you should be able to derive where necessary from more basic principles. Learn the basic steps in proofs, rather than try to commit the entire proof to memory.

You should allow yourself plenty of time to read through all your lecture notes and look back through (and, where necessary, complete) the examples sheets. Mathematics is best revised (as well as learned) by doing it. Try to answer questions from past examination papers.

Practise doing examination questions under self-imposed examination conditions without the aid of your notes. Difficulties which you encounter when trying to do problems and examination questions will force you back to your lecture notes and textbooks for information on the topic you are revising. Make a list of the points you do not understand and the problems you cannot do and arrange to see the appropriate lecturer to go through your difficulties.
Try to avoid working all through the night before an examination, because you might then tire in the examination room. You are likely to do better in the examination if you are feeling wide awake. During your revision, remember to have some variety in your studies.

Intersperse your lecture notes with working through problems from examples sheets and questions from past examination papers. Do not forget to make time for some relaxation during the revision period.

- **Examination Technique**

It is very important that you organise well the time you spend in the examination room. Before you start writing, you should read the instructions at the start of the paper and then read the whole paper carefully, before deciding which questions you are going to answer first. Try to answer the questions posed and avoid including in your answers things that are **not** relevant to the question that has been set. Attempt to answer the exact number of questions requested. It is usually easier to get the first 40% of the marks on any question rather than the last 20%. If you are short of time and have not attempted the number of questions specified in the rubric, it is better to spend the remaining time starting to answer another question rather than attempting to make a good answer better.

If you get stuck on a question, don't panic. You may find that you can't do one part of a question but, by assuming the result, you can continue with the rest. You may be able to complete the missing part later. If you are completely stuck, move on to the next question you intend to do. You can always go back later if you have time to spare or a fresh idea occurs to you. Sometimes, when you are working on one question, ideas will occur to you for solving another. Jot them down immediately for future reference so that you do not forget them.

You should aim to allow yourself time to read through your answers before the end of the examination. Never leave early. You may see something that you missed first time, or get a useful new idea. On the other hand, if you are running out of time on your last question but know how you would have continued; give a brief description of your intended method.

[Much of the above material is taken from the booklet ‘Study Skills for Mathematics’ edited by Pam Bishop and Laurence Nicholas and published by Sheffield Hallam University Press.]

- **Retaking Examinations**

Should you fail a unit and be granted permission to retake by the Examination Board, then the referral/deferral will normally take place at the next opportunity to sit the examination.

- **Referrals for International (non-EU) students**

Referral/deferred examinations are held in Manchester.

The University does not allow retake examinations to be held away from Manchester.

- **Referral Fees**

Information on referral fees are in the Crucial Guide
http://www.studentnet.manchester.ac.uk/crucial-guide/academic-life/exams/resits/

- **Examination Timetables**

The examination timetables are posted well in advance of the examination periods on the website:
http://www.studentnet.manchester.ac.uk/crucial-guide/academic-life/exams/
You must check the examination timetable in good time. Each student is allocated an individual seat number for each examination and you are required to sit in the seat which has been assigned to you. You can obtain your own individual copy of the timetable from My Manchester. You can log into My Manchester at the website: https://my.manchester.ac.uk

Then select the My Course tab followed by the My Exams portlet. You will need your University username and password to log into My Manchester. If you have forgotten your password or you cannot log in for some other reason, you will be prompted to contact the IT Service Helpdesk. Alternatively you can contact them at the website: http://www.itservices.manchester.ac.uk/contacts

Queries about the examination timetable should be addressed to the Student Services Centre.

The University does not regard failure to read the timetable correctly as an acceptable reason for absence.

- **Examination Conduct**

If you have fulfilled the work and attendance regulations prescribed for your programme of study have been allowed to sit University examinations it is important that you read the following rules of conduct.

If you are at an examination and you realise that you have failed to comply with any of these rules, or have any questions, you should contact an invigilator immediately. Students failing to do this, when knowingly breaking examination regulations, may face disciplinary action.

Any other queries regarding exam conduct should be forwarded to the Examinations Team in the Students Services Centre.

- **Arrival**

You will need to arrive at least 15 minutes before the exam starts. If you do arrive late you will be admitted up to 30 minutes after the timed start and will not be given any extra time. If you are more than 30 minutes late you will not be admitted, and you should then report immediately to your School Office.

If you have been given a particular seat number for an examination you must sit in the seat that has been assigned to you. Seat numbers are given on your individual student examination timetable.

- **Examination material**

You must write your registration number (the first 7 digits on the front of your student id card) on every examination answer-book you use. Remember to fill in all the other information asked for.

You must write all your answers legibly. If your work is deemed illegible by the examiners you will normally be required to pay for it to be converted to typescript. You must write in blue or black ink. Pencil is not allowed, except for graphs and diagrams.

Examinations are marked anonymously. At the end of the examination make sure you fold over and seal the gummed edge of the panel on the top corner of each of your answer-books, before they are collected from you.

You must write only in the examination answer-books provided (including any rough work) and not tear pages out of answer books. Any work that you do not wish to submit for marking must be clearly crossed out, but must not be removed from the answer book.
You must not remove answer books (used or unused) from examination rooms. Any other materials that have been provided for the examination must not be removed. Students found doing any of these things will be subject to disciplinary action. Question papers may be taken away unless you are specifically told verbally or in writing not to do so.

- **Leaving the examination**

You must remain seated at all times. You must raise your hand to summon the attention of an invigilator for whatever purpose. If you wish to leave the examination room temporarily you may only do so if accompanied by an invigilator.

If you wish to leave the examination before the allotted finishing time you must remain seated and raise your hand: an invigilator will come to collect your answer book, after which you may leave, silently.

You are not permitted to leave during the last 15 minutes of the examination. At the end of the examination you must stop writing immediately when you are told to do so and remain seated and silent until all answer books have been collected and you are instructed that you may leave.

- **Fire alarm**

If a fire alarm should sound during an examination, follow the instructions given by the invigilator. These will be the standard procedures for evacuating the building. You should leave the room in an orderly way, without talking and without taking anything from your desk, or from the room.

Leave the building and assemble in the designated area. You must not leave this designated area.

You should return to the examination room immediately when you are instructed to do so. Candidates who are still absent once the examination has re-started will not be re-admitted.

As a general rule, examinations will not re-start after an interruption if more than three-quarters of the examination time has already elapsed.

- **Noise**

You must maintain silence throughout the time you are in the examination room. You must not cause any kind of disturbance or distraction, or attempt to communicate with other candidates, by any means.

- **Policy on the Use of Calculators in Examinations**

Students may bring into the examination room any calculator, provided that it does not have any means of inputting or storing text, alphabetical or other symbolic information, including mathematical expressions (except that hexadecimal keys a to f are allowed) any means of transmitting or receiving information, including (but not restricted to) infra-red, microwave and wireless ports and cable connections such as USB ports.

In particular, these rules preclude the use of mobile phones, PDAs (personal digital assistants), and portable computers as calculators.

Calculators must be silent in operation and must have their own self-contained power supply. No recharging facilities will be available, and candidates must bring their own spare batteries.
Invigilators may examine any device a student brings into the examination room. If the device does not comply with these rules, it will be confiscated and returned only at the end of the examination; no replacement will be provided. A form will be completed to record the incident as suspected cheating.

A School may specify that no calculator is allowed in any examination for which it is responsible or that it requires students to use only a specified model (or models) of calculator or that it wishes to allow students to use calculators forbidden by the rules of paragraph 1, above. Where this is the case, clear and specific instructions must be notified to the students in advance of the examination, to the invigilators, and on the examination paper.

For students with disabilities these rules may be over-ridden in specific, individual cases as agreed by the Disability Support Office.

- Use of Language Translation Dictionaries in examinations

Language translation dictionaries may not normally be used in examinations except as specified in Paragraphs 2 and 3 below.

For this purpose a language translation dictionary is defined as a dictionary that simply gives equivalent words or phrases in two languages, without further explanatory text or description.

Students whose first language is not English are allowed to use a language translation dictionary if they are studying a Foundation Year (or other programme) where a recognised and assessed English Language module that must be passed satisfactorily forms part of that programme.

Visiting students whose first language is not English (e.g. Erasmus or other exchange scheme students who will not obtain a degree or other qualification of the University) are allowed to use a language translation dictionary if they have a letter from the relevant School confirming their visiting student status.

Students must take this letter to all examinations to certify that they may use a translation dictionary.

- Use of Other Dictionaries in examinations

Students are not allowed to use scientific or other specialist dictionaries unless a specific instruction to the contrary is given in the rubric at the head of an examination paper.

Students with disabilities are allowed to use electronic dictionaries or similar aids if they have a letter from the Disability Support Office to certify that they may use a specified aid. Students must take this letter to all examinations to certify that they may use the aid concerned.

Full details of the university’s examination regulations, including the university’s policy on the use of calculators and dictionaries, may be found on the website:
http://www.studentnet.manchester.ac.uk/crucial-guide/academic-life/exams/conduct/

- Arrangements for Extra Time and other Special Arrangements

Arrangements for students who need extra time in examinations are normally made centrally by the University’s Examinations Office. However, for injuries or illnesses which occur immediately before or during one of the examination periods, arrangements for students to have extra time for their examinations, or a scribe or a reader, will be made by the School’s Disability Coordinator. If you have the misfortune to find yourself in this position, please give the Disability Coordinator as much notice as you possibly can.
Students who need to take their examinations in a special room or who need extra time for their examinations, or who need the help of a scribe or a reader because of a long-term or on-going disability are strongly advised to see the School’s Disability Coordinator as soon as possible. Students with a short-term disability (for example, resulting from an injury or illness that occurs during the year) should see the School’s Disability Coordinator as soon as possible after the disability occurs. If the DSO makes recommendations for special arrangements for examinations, then the same arrangements can be put in place for coursework tests. Students with a disability who need extra time (or a scribe, or a reader) for coursework tests should see the School’s Disability Coordinator and she will make the arrangements. Please give the Disability Coordinator as much notice as possible for each test, so that she has plenty of time to make the arrangements. Extra time for coursework tests is not given automatically and it is not arranged by the DSO, so if you require disability support provision you do need to make the arrangements personally with the School’s Disability Coordinator.

Examination regulations are given in full at the following website:
http://www.studentnet.manchester.ac.uk/crucial-guide/academic-life/exams/

- **Disclosure of Marks and Transcripts**

Your examination results will be available on My Manchester as soon as possible after the meeting of the relevant Board of Examiners. Detailed information and advice on your progress and examination performance should always be obtained from your Academic Advisor or Programme Director. Please note that examination results cannot be given out by e-mail or by telephone.

Examination Boards usually take place in the last week of February, the last week of June and the last week of October. Results will normally be made available to you within a week of the Examination Board.

If, after graduating, you have need for an official list of such marks, you can obtain an online Academic Transcript or order a paper copy of an academic transcript by visiting the website:
http://www.studentnet.manchester.ac.uk/crucial-guide/academic-life/award-confirmation/

- **Cheating**

Every year a number of students are caught cheating examinations or pass off other people's work as their own in coursework assessments.

In the 12 month period prior to January 2014 the University's Student Discipline Committee dealt with more than 20 cases. Here are some of the outcomes:

- One final-year undergraduate student was expelled immediately with no degree, after 4 years studying at the University;
- One student suspended from his studies with immediate effect;
- Three students intending to practice various professions now unable to follow their chosen career;
- Three final-year students having an entire semester's examinations and coursework assessments cancelled, and each consequently graduating with a lower class of degree (in one case, an Ordinary (not Honours) degree);
- Nine students found guilty of plagiarism in assessed coursework, receiving a mark of zero in each case, and being denied the opportunity to re-submit the piece of work;
- Four students found guilty of being in possession of unauthorised material in an examination room, receiving marks of zero for the exam paper in question and being denied the opportunity of a re-sit examination.

In all these cases a record of the offence and the penalty imposed has been ordered to be held on the student's personal file in the academic department and will seriously affect the nature of any reference issued to potential employers or other educational institutions.
Fellow students have no sympathy for those who cheat and those who have succeeded at cheating can feel subsequent shame and loss of confidence because they have not given themselves a fair test of their ability and end up cheating themselves.

Supervision of Dissertations

- **Dissertation Supervisors**

  Supervisors for students taking a taught MSc (or the Postgraduate Diploma in Pure Mathematics and Mathematical Logic) will normally be allocated during the second semester, taking into account the interests of each individual student. Normally students will start some work on some preliminary reading for their M.Sc. dissertation or Diploma report prior to the Easter break, but the bulk of the work is done in the period following the second semester written examinations.

  It is important to structure this time carefully, in particular to allow sufficient time for writing up the dissertation.

- **Supervision**

  This section identifies the responsibilities of your supervisor and yourself during the period of your dissertation. Depending on your programme, your dissertation counts for either 60 or 90 credits. Hence, it is a serious piece of work and you must have a high degree of self-motivation.

  You should establish appropriate supervision arrangements with your supervisors at the start of the project. Contact your supervisor as soon as possible to arrange a first meeting when you can discuss a rough timetable. The frequency of the meetings should be dependent on the nature of the project and will be agreed with you subject to the supervisor’s discretion. A normal level of supervision might be half-hourly meetings each week or hourly meetings each fortnight, but this may vary depending on your supervisor and the nature of your dissertation topic; the frequency of meetings may also change over the course of the dissertation component. Your supervisor can also be accessible at other appropriate times for advice and for responding to difficulties you may raise, subject again to the supervisor’s discretion. However, arrangements need to be fluid, as academic staff have many other things to do beside project supervision (including holidays). If your supervisor expects to be absent for a significant period of time (eg 3 weeks or more) then he/she should consider arranging alternative temporary substitute supervision.

  As a matter of courtesy to your supervisor you should always arrive on time for your arranged meetings. You should never fail to turn up at a meeting without good reason. If you have to cancel an appointment then you should endeavour to contact your supervisor in advance.

  If you are unhappy at any stage with the supervision you are receiving then you should, in the first instance, contact your programme director; however, changing your supervisor may not always be possible.

- **The responsibilities of your supervisor are to:**

  1) Discuss the project with you and, in particular, to make sure that in general terms the project is feasible within the time available.
  2) Indicate, at the beginning of the project period, if necessary, useful, relevant reading.
  3) Give guidance about: the nature of the project and the standard expected, the planning of the work required, relevant existing literature, sources and requisite research techniques.
  4) Maintain contact through regular meetings (the frequency of such meetings is subject to his/her discretion and should be agreed in advance; one meeting each week or one meeting every two weeks would be considered normal).
  5) Be accessible at other appropriate times, for example by email or during office hours, subject to discretion.
6) Notify you when they will be absent from the School for more than a few days, and consider making alternative supervision arrangements during long (e.g., over 3 weeks) absences.

7) Give advice on the necessary completion dates for successive stages of the work, so that you submit your dissertation by the required deadline.

8) Answer all reasonable requests for advice, in particular regarding plagiarism and general advice on academic writing.

9) Where feasible and reasonable, make you aware when work or progress in your research is below standard. However, note that you are ultimately responsible for the standard of your dissertation.

You can normally expect your supervisor to provide a critical reading and detailed feedback on at least one substantial portion (e.g., one chapter) of your dissertation. This would normally include correction of English where necessary, but does not include full proof-reading.

Note: dissertations must attain a good standard of English. It is not the responsibility of the supervisor to ensure this. It is your responsibility to ensure that spelling and grammar are free of errors. If your written English is too poor to be routinely corrected, then your supervisor may advise you on appropriate remedial action, for example, attending courses provided by the University's Language Centre.

You should not expect your supervisor to provide repeated detailed correction of your dissertation; this would give you an unfair advantage over other MSc students.

- **Your responsibilities are to:**

1) Take the initiative in raising problems or difficulties, bearing in mind that prompt discussion and resolution of problems can prevent difficulties and disagreements at a later stage.

2) Maintain progress of your work in accordance with the stages agreed with your supervisor.

3) Maintain written records of the progress of work and discussions with your supervisor in order to facilitate the writing of a dissertation.

4) Remain in Manchester for the duration of your project work, except by prior agreement with the School (which will normally only be given in exceptional circumstances).

5) Making your supervisor aware of any circumstances likely to affect your work.

6) Being familiar with the University, Faculty and School regulations and policies that affect you, including the University's policy on the presentation of MSc dissertations and the University's policy on plagiarism.

7) Allowing adequate time for the binding of your dissertation.

8) Recognize that your dissertation is an examined piece of work which will be marked by two examiners. In many ways, therefore, the dissertation is just like any other examination that you undertake. It is you, and no one else, who must sit a conventional, written examination. Similarly, it is you alone who must write the examined dissertation.

9) Your supervisor gives help and advice on how to carry out the research. However, the supervisor has to strike a balance on the amount of help he/she can offer. If your supervisor gives too much help, the dissertation reflects (to an unacceptable extent) his/her work and abilities as well as your own. The purpose of the project is to examine your (not your supervisor’s) abilities. As stated above, you must understand that you undertake this within the principle that a dissertation is your own work.

10) In other words, it is your sole responsibility to demonstrate that you can write a dissertation of satisfactory (Masters) standard. This is a responsibility that you cannot and should not share with any other person - be it another student, your supervisor, or anyone else.

- **Writing the Dissertation**

This section contains some guidance on what may be expected of a satisfactory dissertation. The length of the dissertation may vary depending on your programme and on your dissertation topic. A typical dissertation will normally be between 50 and 75 pages (possibly with the addition of tables and appendices), based upon a 12-point font size and 1.5 line spacing – regulations relating to the presentation of dissertation can be found in the university’s booklet “Guidance for the Presentation of Taught Master’s Dissertations”.


There is a LaTeX style file available on the School's website that produces dissertations in the correct format. As a general rule, the inclusion of computer code is not encouraged unless it is central to the aim of the dissertation. If you are writing your dissertation in LaTeX and need to include pictures or diagrams, it is perfectly acceptable to draw them (neatly) by hand. You can scan hand-drawn pictures in as .jpg files and then include them in the electronic copy of your dissertation by using the command \includegraphics[width=10cm]{filename.jpg} in the main body.

Past experience suggests that the best dissertations are written up as the project progresses. This allows supervisors to comment on early drafts, which can lead to improvements. Also many students don't seem to realise just how time consuming writing up can be! Past experience also suggests that taking too much time off does not lead to good dissertations. We suggest you take your longest holiday break in September after submission.

Past experience also suggests that poor dissertations can often be the result of:
- a poor record of attendance at supervisions,
- writing the dissertation at the last minute, particularly where the supervisor has not even seen a first draft.

Dissertations should normally contain:
- a cover page which gives the title of the project, a statement, the name of the student, the name of the student’s department/school and the year of submission;
- an abstract;
- a detailed list of contents at the start;
- an introduction to the project and the dissertation;
- proper structure in the main body of the text including section numbering;
- conclusions;
- a full and detailed list of references (bibliography);
- acknowledgement of all persons who have contributed to the development of the project.

Dissertations must use consistent mathematical notation throughout.

Some questions that the examiners will be asking are:
- Does the introduction say clearly what the dissertation is about?
- How well have you explained the area of work and summarised the relevant literature?
- Does the dissertation show evidence of learning beyond the material of the taught courses and options?
- If the dissertation is mainly a survey, is it complete and up to date, and have you shown clearly, by summarising and comparing the literature in your own words, that you have mastered the subject?
- If the dissertation involves numerical work, is it described clearly enough for someone else to reproduce the calculations, if required, and do the conclusions demonstrate that you understand what has been done?
- Does the dissertation have a logical structure?
- Are books and journal articles adequately referenced? Note that a complete bibliography is important for a good dissertation and should not be ignored.
- Where the results of numerical and other work are being discussed is this just a statement of what the results are or does the text contain real interpretation of the results. For example, does the text explain why the results are as they are?

It is not necessary, and in fact would be quite uncommon, for a dissertation to contain truly original work that would be classified as research. What matters is that it shows your own understanding of the chosen subject (not your supervisor's!). Remember, it is your work that is being examined and not the supervisor's. In particular, the supervisor is not there to proof-read your drafts or to teach you to write in English.

Style and layout are up to you, subject to the constraints on structure detailed above. However, it is a good idea to look through a few journal articles and note the elements of good style. Remember, the examiners are researchers which mean that they are, to a large extent, professional authors and will not appreciate having to navigate a badly laid-out or sloppily-written dissertation.
The final version of the dissertation should be free of typing and spelling mistakes. Modern word processing packages can check spelling and identify poor grammar. Examiners may tolerate, at their discretion, a small number of errors. However, a large number of spelling mistakes and errors in grammar may be cited by examiners as a reason for stating that the dissertation had been judged as not reaching Masters Standard.

The thesis should contain all the necessary diagrams, formulae, tables, charts and bibliography. These items must be clearly presented with appropriate identifying information (titles, equation numbers, labels etc). Sources of data must be given in full detail.

References should be entered in an appropriate format (see below for examples). Candidates must check to make sure that no references are missing from the bibliography. As with spelling/typing mistakes and poor use of English grammar, omission of references can cause the award of the degree to be deferred or refused.

There are many different acceptable referencing styles. Professional journals and scholarly books provide examples of different acceptable styles and your supervisor can also provide guidance on referencing style.

- **Referencing**

References to publications in the text or footnotes, other than to newspapers, magazines, or popular periodicals, should be as follows:

'Smith (1992) reports that …', 'Chan et al. (1995) content analyse …', '(see Fama and French, 1994)' or 'Smith [1] reports that...', 'Chan et al. [2]...', '(see Farma and French [FF1])'.

Note that “et al.” can be used where there are more than two authors and you are referring to the article for a second or further time. Note also that if the passage that contains the citation is already in parenthesis, we normally omit the parenthesis around the year of the reference. Finally, when you are referring to a very specific point in an article that is incidental to its main contribution, or when you include a quotation from an article, you should give the specific page reference to where this can be found in the original article. For example, “ … Beaver (1996, p. 45) refers to …” or “by Robinson [R, Theorem 6.3]”. You should not list references separately in footnotes. If the footnote itself includes text that contains a reference, you then follow the same procedures as in the main text.

You must make sure that all references appearing in your main text (and footnotes) are listed in the list of references at the end of the main text. The reference list must be in alphabetical order of the first author’s surname.

Examples of types of references are as follows:

For books or monographs:

**Author(s), Year (in brackets), Title (underlined), Edition (in brackets), City of publication, Publisher**


For contributions to collective works:


For periodicals:

**Author(s), Year (in brackets), Title (between apostrophes), Journal name (underlined), Volume number, issue number, Page numbers**

Example:


For references on the web:

Where the reference list contains more than one source from the same author(s) for the same year they should be
distinguished by 2000a, 2000b, etc.

References to newspapers, magazines, and popular periodicals:
These should not appear in the reference list, but should be referred to in the text or footnotes as follows, ‘The
Financial Times (20 June 2001) reported that …’;

‘Observers also criticized the extent of Gent’s control over Vodafone (Economist, May 2000).’

There are many other acceptable styles of listing references.

• Submission of Dissertations

You should aim to submit your thesis by the end of the registration period for your programme of study, and no
later than the final submission deadline. This deadline is currently 4pm on Friday 4 September 2015.

Students are required to submit 2 copies of their soft bound paper thesis to the main Mathematics Reception and to
upload a .pdf of their thesis to Turnitin. It is equally important to do both by the advertised deadline. These must
be identical or the dissertation will be regarded as not correctly submitted and liable for the penalties for late
submission.

Guidance on presentation of dissertations is available from
http://documents.manchester.ac.uk/studentrelatedlist.aspx

It is strongly recommended that you use the University’s LaTeX style file muthesis.cls and the template .tex file,
thesis.tex available from https://www.maths.manchester.ac.uk/intranet/it-support/useful-files/.

• Referral Fees

Information on referral fees are in the Crucial Guide
http://www.studentnet.manchester.ac.uk/crucial-guide/academic-life/exams/resits/

• Mitigating Circumstances: Guidance for Students

What is mitigation?

1.1 Sometimes circumstances or events beyond your control may adversely affect your ability to perform in
an assessment to your full potential or to complete an assignment by the set deadline. In such cases
mitigation may be applied, i.e. treating marks or results in a way that recognizes the adverse impact that
may have resulted from those circumstances or events, or waiving penalties that would arise from late
submission.

1.2 Mitigation will not result in the changing of any marks, unless penalties for late submission are waived
after an assignment has already been marked. Instead, mitigation may result in some marks being
disregarded and the assessment being excused because it was adversely affected. You may also be given a
mark for a whole unit based on your performance in the parts that were not adversely affected. Mitigation
may also mean treating your overall performance as borderline even though the marks you obtained would
not normally be high enough, and so considering you for a more favourable result such as a higher degree
class.
Approaching your School

2.1 You should approach the appropriate officer in your School as soon as possible if you consider that some serious illness or misfortune has adversely affected your ability to complete one or more assignments even within the extended deadline, or if you believe that the results you might obtain from one or more assessments will be adversely affected.

2.2 You should first seek advice from the officer as to whether the adverse circumstances are sufficient to warrant consideration by your School’s Mitigating Circumstances Panel. You should also seek advice as to whether it is in your interest to consider alternative remedies such as a deadline extension, re-scheduling of an assessment within a current assessment period, or sitting an examination at the next available opportunity. In very serious cases, you might even be best advised to interrupt your studies for a period.

Nature of mitigating circumstances

3.1 It is important to remember that, in order to qualify for consideration, the adverse circumstances or events must be unforeseeable or unpreventable as far as you are concerned, and sufficiently disruptive to have a significant adverse effect on your academic performance or your ability to complete assignments by the due date.

3.2 Circumstances or events that merit consideration may include: suffering a serious illness or injury; the death or critical illness of a close family member; a significant family crisis leading to acute stress; and unplanned absence arising from such things as jury service or maternity, paternity or adoption leave.

3.3 Circumstances or events that would not normally merit consideration include: holidays or other events that were planned or could reasonably have been expected; assessments that are scheduled close together or on the same day; misreading the timetable for examinations or otherwise misunderstanding the requirements for assessment; inadequate planning or time management; failure, loss or theft of a computer or other equipment, including inability to print off work for whatever reason; consequences of paid employment (except in some special cases for part-time students); exam stress or panic attacks not diagnosed as illness; and minor disruption in an examination room during the course of an assessment.

Claiming mitigation

4.1 If the School Officer confirms that your circumstances merit consideration by the School Mitigating Circumstances Panel, you should complete the Notification of Mitigating Circumstances form. This should completed on line as soon as possible, together with independent third-party supporting or corroborative documentation. The nature of such documentation will vary according to the nature of the circumstances, but it must sufficiently independent to confirm the veracity of the case you are making (e.g. a letter or medical certificate signed by a medical practitioner, a document from an outside agency etc.). Information of a confidential nature should be included in a sealed envelope.

http://www.maths.manchester.ac.uk/study/postgraduate/information-for-current-students/student-support/mitigating-circumstances/

4.2 You must submit the form as soon as possible and always before the beginning of an examination period (except for circumstances arising during the course of that assessment period, in which case the application must be made in time for consideration before the relevant meeting of the Board of Examiners). Late requests for mitigation will not be considered without a credible and compelling explanation as to why the application was not made at the appropriate time. Requests made after the publication of results will be treated as appeals under Regulation XIX, but again there should be a credible and compelling explanation as to why you did not bring the circumstances to the attention of your School at an earlier stage.

4.3 The School Mitigating Circumstances Panel will need to agree that your circumstances were unforeseeable and unpreventable and that the effect on your academic performance would have been
significant. If so, it will advise the Board of Examiners how serious it judges the effect was, and the Board
will then decide how to apply mitigation, on the evidence available on your performance (coursework
marks and examination marks either for individual course units or for the assessment period as a whole, as
appropriate). Mitigation will depend on how serious the adverse circumstances were and how far you are
from any borderline on the basis of the existing mark, or profile of marks: the farther you are from a
borderline, the more serious the adverse circumstances need to be to change the Board’s overall decision.
However, even if the decision does not change, a note will be added to the relevant marks on any
transcript you receive to indicate that the assessment was subject to circumstances that may have had an
effect on your performance.

See also Sickness and Absence.
Sickness and Absence

When you register you sign an agreement to follow University regulations. These require you to attend all classes organised for you. The only reasons for nonattendance are on health or compassionate grounds. If you miss a class you must let the member of staff who is taking the class know why. In the event of injury or illness likely to lead to your absence for any appreciable time, you must let your Programme Director know at the time. Illness must be confirmed by a medical note from your G.P. or other doctor wherever possible. This is particularly important if you have missed an examination or coursework test or coursework deadline as a result of illness. (Please note that some G.P. practices will charge for medical certificates.) You must always complete a self-certification form (available from reception) and, if necessary, a Mitigating Circumstances form (available online).

For other problems that cause you to miss classes, examinations or coursework, you must also complete a School of Mathematics Mitigating Circumstances Form. Students may be given permission to submit work late if there are Mitigating Circumstances but this would need to be authorised in due course by the Mitigating Circumstances Panel. You should apply for an extension before the deadline whenever possible. Applications submitted after the deadline must have a good reason for not being submitted before the deadline. Should you be unable to submit coursework by the deadline as a result of illness or any other acceptable cause, you should see the lecturer concerned and your Programme Director. You should also obtain a doctor's note (whenever possible) and complete a School of Mathematics Mitigating Circumstances Form available online from http://www.maths.manchester.ac.uk/study/postgraduate/information-for-current-students/student-support/

- Ill Health

a. It is a requirement of your registration with the University of Manchester that you register with a local general practitioner. A list of GP practices can be obtained from the Student Health Centre, any University hall of residence or a local Pharmacy. According to guidance issued by the General Medical Council it would not be regarded as good practice for a family member to be the registered GP or to offer treatment except in the case of an emergency.

b. You should always consult your GP (or for emergencies the Accident and Emergency Department of a hospital) if your illness is severe, if it persists or if you are in any doubt about your health. You should also consult your GP if illness keeps you absent from the University for more than 7 days including week-ends. If you do consult a GP and they consider that you are not fit for attendance at the University, then you should obtain a note from the doctor to that effect or ask them to complete Part III of the University form ‘Certification of Student Ill Health’ copies of which are available at local GP surgeries. You should hand this certificate to your programme director, tutor or school office as appropriate at the earliest opportunity.

c. If your condition is not sufficiently serious to cause you to seek medical help, then the University will not require you to supply a doctor’s medical certificate unless you are absent from the University due to illness for more than 7 days (in which case see b. above). You must however contact your school as soon as possible and self-certify your illness (that is complete and sign the “Certification of Student Ill Health” form to state that you have been ill) as soon as you are able to attend your school. You should do this if your illness means you are absent from the University for any period up to 7 days (see d.(i)) or if you are able to attend the University but your illness is affecting your studies (see d. ii and iii).

d. The following sub-paragraphs explain what you should do if your illness affects your attendance at compulsory classes or if you consider that your performance in your studies/examinations has been impaired.

(i). If you are unwell and feel unable to attend the University to take a compulsory class, assessment or examination then you must seek advice by contacting your school immediately, in person, through a friend or family member, by telephone or by email. This is to ensure that you understand the implications of being absent and the consequences for your academic progress, which might be quite serious. You must do this as soon as possible so that all options can be considered and certainly no later than the day of your compulsory class, assessment or examination. If you do not do this then you will normally be considered to have been absent from the class without good reason, or to have taken the assessment or
examination in which case you will be given a mark of zero. You must also complete and hand in a “Certification of Student Ill Health” form on your return.

(ii). You may be unwell but are able to proceed with an assessment or examination and yet you feel that your performance will have been impaired. If you wish this to be taken into account as an extenuating circumstance, you must inform your school about this on the day of the assessment or examination and hand in to your school a completed “Certification of Student Ill Health” form. If you leave this until later it will not normally be possible to take your illness into account when assessing your performance.

(iii). If, as a consequence of your illness, you wish to seek an extension to a deadline for submitting assessed coursework, you must complete a “Certification of Student Ill Health” form and discuss it with the appropriate person in your school. The application for extension must be made BEFORE the deadline and not retrospectively.

(iv). You may be under occasional and on-going medical attention which affects your studies. If so, you should obtain a letter from your physician which should be given to your school before the end of the January, May/June or August/September examination period, as appropriate, if you wish your condition to be taken into account as an extenuating circumstance.

Notes:

i. Certification of Student Ill Health forms are available in all schools and halls of residence.

ii. Your school will give you guidance on the effect of any absence from your studies or if you consider your illness has affected your studies. If you have repeated episodes of ill health which is affecting your studies, your school may refer you to the Student Health Centre.

iii. If you are found to have been deceitful or dishonest in completing the Certification of Student Ill Health form you could be liable to disciplinary action under the University’s General Regulation XX: Conduct and Discipline of Students.

iv. The use of the “Certification of Student Ill Health” forms by GPs as described above has been agreed by the Manchester Local Medical Committee. A GP may make a charge for completing the form.
How to change your Degree Programme or Status

Occasionally, students realise that they have made a mistake in their choice of degree programme and wish to transfer to a different degree programme. Alternatively, students sometimes decide to withdraw from their degree programme or apply to interrupt their studies. The procedures to be followed by students in these situations are given below. In all cases, do consult your Programme Director before making a decision. We are here to help and advise you. We may be able to suggest alternative solutions to the problems and difficulties that you are experiencing.

- **Transfer between degree programmes**

  Students contemplating any change of degree programme should consult their Programme Director as soon as possible. (Any transfer request requires the approval of Programme Director for your new programme.) Once approved the change should be e-mailed to mathematics@manchester.ac.uk marked Postgraduate Transfer Request.

- **Interruption (or suspension) of studies**

  Sometimes students need to interrupt their programme of study to help them to recover from medical problems, or to resolve issues of a personal nature. If you are thinking of interrupting or suspending your studies, then you must discuss your plans with your Programme Director as soon as possible. You should complete the Interruption Form to apply for permission to interrupt your studies. (Note that part of the form has to be completed by your Programme Director) and you will need to provide evidence to support your case (see mitigating circumstances).

  http://www.maths.manchester.ac.uk/study/postgraduate/information-for-current-students/general-information/forms-policies-regulations/

- **Withdrawing from your degree programme**

  Students who are thinking of leaving (withdrawing from) their degree programme should consult their Programme Director as soon as possible. If you do decide to withdraw you should confirm your decision in writing to the Postgraduate Administrator listing your last date of study.

- **Tuition Fees for Students who withdraw or interrupt**

  Home/EU and International students responsible for the payment of their own tuition fees will be charged on a daily basis should they withdraw or suspend their studies.
Progression and Award of degrees

You should read and understand the Regulations: Degree of Master, Postgraduate Diploma and Postgraduate Certificate http://documents.manchester.ac.uk/DocuInfo.aspx?DocID=7327

Below is a brief informal summary to the main points on what you need to do to pass the programme. In case of conflict, the Regulations take precedence over this informal summary.

Postgraduate taught degrees at the University of Manchester are based on the National Framework for Higher Education Qualifications (FHEQ). This framework requires students to achieve credit at Masters' level in order to get an award. An MSc programme will normally have 180 credits, a Postgraduate Diploma programme will normally have 120 credits, and a Postgraduate Certificate programme will normally have 60 credits.

- The MSc programme

The MSc programme comprises of a taught component and a dissertation component.

- The taught component

To pass the taught component of the MSc you need to be awarded a sufficient number of credits (90 credits for the MSc in Pure Mathematics and Mathematical Logic, 120 credits for all other MSc programmes).

If you pass a course unit with a mark above the MSc pass mark of 50 then you will be awarded the credits for that course unit.

If you fail one or more course units then you can still be awarded the credits for these course units, provided that you have not failed more than 30 credits of course units and have marks in the `compensation zone' (40-49) in these course units. (Thus if you have two marks between 40-49 and all other marks above 50 then you will pass the taught component of the MSc.)

If you fail a course unit with a mark below 40 then you will need to be referred (resit) in this course unit. If you fail more than 30 credits of course units with a mark below 50 then you will need to be referred in these course units (although compensation can still be applied). If you have failed more than half the taught credits (45 credits for Pure and Logic, 60 credits for all other MScs) then you will not be allowed to be referred and you will be considered against the criteria for a Postgraduate Diploma.

Referral exams normally take place in August/September.

To be awarded the credits in a referred exam, you must score a mark above 50. However, the mark recorded on your transcript will be capped at 40 (the capped mark is applied to the course unit, not just the failed element). Compensation is allowed for referrals provided that you have not already used up your quota of compensation.

- The dissertation component

The pass mark for the dissertation is 50.

If you fail your dissertation at the first attempt then you will normally be given the opportunity to resubmit a revised version of the dissertation. You will normally be given up to six months in which to make the requested revisions or undertake additional work. You will be provided with feedback from your examiners and guidance on the revisions required to bring the work to the appropriate standard for the Masters award.

- Pass criteria for MSc programmes

To pass the MSc programme you need to
• pass the taught component
• pass the dissertation component.

You will normally be awarded, subject to the approval of the Examination Board, an MSc with Merit if you
• pass the taught component
• pass the dissertation component with a mark of 50% or more
• have a weighted average of the taught component and dissertation component above 60.

You will normally be awarded, subject to the approval of the Examination Board, an MSc with Distinction if you
• achieve an average in the taught component of 70 or more and with no mark below 50 in any course unit
• pass the dissertation component with a mark of 70 or more.

If you have been referred in any course units or had to resubmit the dissertation then you will not be eligible for a distinction.

• The Postgraduate Diploma programme

To pass the Diploma you need 120 credits.

If you pass a course unit with a mark above the Diploma pass mark of 40 then you will be awarded the credits for that course unit.

If you fail one or more course units then you can still be awarded the credits for these course units, provided that you have not failed more than 30 credits of course units and have marks in the 'compensation zone' (30-39) in these course units. (Thus if you have two marks between 30-39 and all other marks above 40 then you will pass the taught component of the Diploma.)

If you fail a course unit with a mark below 30 then you will need to be referred (resit) in this course unit. If you fail more than 30 credits of course units with a mark below 40 then you will need to be referred in these course units (although compensation can still be applied). If you have failed more than half the taught credits (45 credits for Pure and Logic, 60 credits for all other programmes) then you will not be allowed to be referred and you will be considered against the criteria for a Postgraduate Certificate.

To be awarded the credits in a referred exam, you must score a mark above 40. However, the mark recorded on your transcript will be capped at 30 (the capped mark is applied to the course unit, not just the failed element). Compensation is allowed for referrals provided that you have not already used up your quota of compensation.

Referral exams normally take place in August/September.

To pass the Diploma programme you need to
• pass the taught component
• for the Postgraduate Diploma in Pure Mathematics and Mathematical Logic only, achieve a pass mark in the Diploma Report.

• The Postgraduate Certificate programme

To pass the Certificate you need 60 credits.

If you pass a course unit with a mark above the Certificate pass mark of 40 then you will be awarded the credits for that course unit.

If you fail one or more course units then you can still be awarded the credits for these course units, provided that you have not failed more than 15 credits of course units and have marks in the 'compensation zone' (30-39) in these course units.
If you fail a course unit with a mark below 30 then you will need to be referred (resit) in this course unit. If you fail more than 15 credits of course units with a mark below 40 then you will need to be referred in these course units (although compensation can still be applied). If you have failed more than half the taught credits (30 credits) then you will not be awarded a degree.

To be awarded the credits in a referred exam, you must score a mark above 40. However, the mark recorded on your transcript will be capped at 30 (the capped mark is applied to the course unit, not just the failed element). Compensation is allowed for referrals provided that you have not already used up your quota of compensation.

Referral exams normally take place in August/September.

- **Examination boards**

There are normally three assessment periods in each year: January, May/June and August/September. After each assessment period there is an Examination Board.

The Examination Board has the responsibility to implement the University's policies and regulations in a manner which is fair to students, taking into account all known circumstances. Each student is responsible for informing the Examination Board of any facts that he/she wishes to be considered. These facts may, for example, be concerned with personal difficulties or ill health (whenever possible obtain a medical certificate for ill health). You should always inform your Programme Director of any personal difficulties affecting you or your studies; you should also complete a School of Mathematics Mitigating Circumstances Form, available online from [http://www.maths.manchester.ac.uk/study/postgraduate/information-for-current-students/student-support/](http://www.maths.manchester.ac.uk/study/postgraduate/information-for-current-students/student-support/)

Remember that if you want the Examination Boards to take medical or other special circumstances into account, it is important that you provide independent documentary evidence (for example, a letter from your GP or hospital) to support your case, whenever possible

The deadlines for submitting information about mitigating circumstances to the Examiners’ Boards are:

<table>
<thead>
<tr>
<th>First Semester Mitigating Circumstances Deadline:</th>
<th>30 January 2015</th>
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</thead>
<tbody>
<tr>
<td>Second Semester Mitigating Circumstances Deadline:</td>
<td>5 June 2015</td>
</tr>
<tr>
<td>Referred/Deferred Examination Mitigating Circumstances Deadline:</td>
<td>1 September 2015</td>
</tr>
<tr>
<td>Dissertation Submission (MSc Only) Mitigating Circumstances Deadline</td>
<td>15 September 2015</td>
</tr>
</tbody>
</table>

Only new information that has become available subsequent to the meeting of the Examination Board may be used in appeals, other than where exceptional circumstances gave the student good reason to withhold information.

- **Criteria for assessing students' work**

The following criteria will be used in assessing taught elements, including examination papers and coursework, of the Masters programme.

70+ (allows award of distinction). Work of excellent quality showing evidence of independent work, independent reading, originality, high accuracy, critical appraisal, and very good presentation, a wide and thorough understanding of the syllabus, ability to apply the theory and methods learnt to solve unfamiliar problems.

60-69 (Good Pass) Work of high quality showing evidence of understanding on a broad range of topics, good accuracy, good structure and presentation with clear aims/objectives and relevant conclusions, a good knowledge of the syllabus, some originality, limited ability to tackle unseen problems.
50   (Pass) Work demonstrating a clear ability to acquire and apply knowledge in a coherent, if uncritical fashion. Some understanding and ability to do routine familiar problems, evidence of good understanding of the main ideas in the course units, little originality, reasonable accuracy, good presentational skills with a reasonably clear structure and aims/objectives, attempts to draw conclusions.

40-49  (potentially compensable for Masters) Ability to do routine work, basic understanding of the important course material, no originality limited accuracy, adequate presentational skills, with clear but limited objectives, does not always reach a conclusion.

30-39  (Fail) Work shows some understanding of the main elements of the programme material and some knowledge of the relevant literature. Shows a limited level of accuracy with little analysis of data or attempt to discuss its significance.

<30   (Fail) Work which does not meet one or more of the pass criteria.

- Prizes and awards

The Numerical Algorithms Group (NAG) fund two prizes at the University of Manchester.

1. NAG Prize in Numerical Analysis
This will be awarded to the student on the MSc in Applied Mathematics who has the best performance in the exams (January and May/June) for the numerical analysis options, as determined by the programme committee.

2. NAG Prize in Mathematical Finance
This will be awarded to the student on the MSc in Mathematical Finance who has the best performance in the January exams, as determined by the programme committee.

Thales Prize in Applied Mathematics

'Best performance' normally means the highest average credit-weighted mark. Each prize is normally awarded to a single person, but in the case of a tie then the prize can be split equally amongst more than one person.

Royal Statistical Society (RSS) Prize in Statistics
This will be awarded to the student on the MSc in Statistics who has the best performance overall in the taught and research components of the programme. The prize is one year’s free membership of the Royal Statistical Society (with associated benefits) at the grade of Graduate Statistician.

- Appeals

Students may appeal against the decision of an Examination Board.

Appeals can normally be made on the basis of perceived procedural irregularities. Please note that appeals on the basis of academic judgement are not allowed.

Students are strongly advised to hold informal discussions with the School of Mathematics about their case for appeal, and the appeal procedures, prior to submission of an appeal.

The School allows students to see their marked Mathematics examination scripts. Scripts can only be viewed by appointment and the viewing opportunity will last about 10 minutes. You will receive further information by email before each viewing period.

The School does not re-mark examination scripts. Students can ask the School to check that all parts of their script have been marked, their marks have been added up correctly and their coursework marks have been included.
correctly. All such requests from students are collated and passed to the Director of Postgraduate Studies, who arranges for the scripts to be checked and the results communicated to the students.

Full information about the formal appeal procedures is given in Regulation XIX (Academic Appeals), which is downloadable from the website: http://www.studentnet.manchester.ac.uk/crucial-guide/academic-life/formal-procedures/academic-appeals/

However, you should note that the purpose of this Regulation is to safeguard the interests of all students. It may be used only when there are adequate grounds for doing so (as specified in the Regulation) and may not be used simply because a student is dissatisfied with the outcome of his or her assessment or other decision concerning their academic position or progress.

**An introduction to Postgraduate Taught Degree Regulations for Students September 2012**

Postgraduate Taught degrees at the University of Manchester are based on the National Framework for Higher Education Qualifications (FHEQ). This framework requires students to achieve credit at masters’ level in order to get an award. For a standard postgraduate taught Masters programme this will normally mean passing 180 credits. A standard postgraduate diploma will normally have 120 credits and a postgraduate certificate 60 credits. The way in which you study these credits will be defined later in the programme handbook and the programme specification.

The University sets standards relating to your performance on every unit but also on your progression through the programme. Your programme and course unit specifications will set out the requirements for passing the credit on individual units.

The pass mark at MSc level is normally 50%

**What happens if I fail some units?**

First of all don’t panic, but the first thing to do is sit down with your academic adviser or Programme Director who will take you through your options. The regulations allow you further attempts of up to half the taught credits, for a standard master’s programme as defined by your programme specification, so you can still get back on track. In addition you may also resubmit your dissertation on one further occasion, subject to the Examination Board’s decision.

This is known as ‘referred assessment’ and these reassessments will normally take place in the same academic year as the original assessment. The Examination Board will then make decisions on your progress and advise you accordingly of the decisions and next steps. Referred assessment at Masters level will be capped at 40% and this is the mark that will be shown on a transcript of results as a 40R. (the capped mark is applied to the unit level mark, not just the failed element). It is this mark that will be used to calculate your final degree classification.

If you pass most of your units and only ‘just’ fail some of them, there may be a possibility of the examination board compensating this failed credit. This means if your mark was between 40-49% at Masters level the examination board is able to compensate up to a maximum of 30 credits. Your transcript of results will show the actual mark achieved (e.g. 47C).

If you are on a postgraduate diploma or certificate programme then the overall pass mark will normally be 40%. The same logic for managing reassessment will be applied on these programmes but the mark will be capped at 30R and compensation can be applied for marks between 30-39%. You can be referred in up to half the taught credits on a postgraduate diploma or certificate programme and compensated in up to 30 credits on a postgraduate diploma programme and 15 credits on a the postgraduate certificate programme. Some programmes, particularly those which are externally accredited or linked to professional practice may set a higher pass rate than stated in the regulations.
What happens if I fail my resits?

Upon taking the referred assessment, if you fail again the Examination Board will make a decision with regards to your progress. The possible options available may, in exceptional circumstances, include repeating the unit or being awarded an exit award once you've exhausted all the opportunities to retrieve failed assessment. Referrals may also be compensated; so if you manage to achieve a mark at referral of between 40-49% at Masters level, this may be compensated providing you haven’t already used your quota compensatable credit. If a mark in a referral is compensatable, then this mark will be capped at 40 and this is the mark (40R) that will show on your transcript of results and be used to calculate your final degree classification.

Again if you are on a postgraduate diploma or certificate programme then the pass mark and compensation mark range will be adjusted according to the lower pass rate.

What happens is I fail my dissertation?

If you fail your dissertations at the first attempt you will be given the opportunity to resubmit a revised version of the dissertation. You will normally be given up to six months in which to make the requested revisions or undertaken additional work. You will be provided with feedback from your examiners and guidance on the revisions required to bring the work to the appropriate standard for the Masters award.

How is my degree calculated?

To be considered for a Master’s Degree you must have achieved 180 credits at the appropriate level. Don't worry if you have had a referral or compensation as these still count towards your credit total for a Pass or Merit. If, however, you have undertaken any referred assessment or been compensated you will not be eligible for a Distinction.

A merit is normally awarded if the average mark, based on the weighted programme as a whole is above 60%.

A distinction is normally awarded if both the average mark in the taught component and the dissertation mark is over 70% and no referrals were taken.

If you are completing a postgraduate diploma or certificate programme then these degrees are only awarded as a pass.

When and how are decisions made about my results and my progress?

There are normally three available assessment opportunities: January, May/June and August/September within each academic year. It is expected that all your attempts at referral assessment will take place in the same academic year in which the assessment was first taken. After each assessment period there is an Examination Board.

Members of the Examination Board normally include your unit tutors, programme directors and overseen by an external examiner from another university. It is the job of the Examination Board to review all the results anonymously and make decisions on the award of credit and who can resit exams / assessment or gain compensation. It is also the role of the Examination Board to decide who cannot continue and will leave the University with an exit award. Some students will narrowly miss the threshold for a degree classification and so we look at their pattern of marks (Mark Distribution) and may look at their examined work (Mark Review).

What do I do if I disagree with the Examination Board’s decision?

The University has clear and fair procedures which set out the course of action should you wish to appeal against an Examination Board decision or make a complaint. There are a number of grounds on which an appeal may be
made, however an appeal which questions the academic or professional judgement of those charged with assessing your academic performance or professional competence will not be permitted. The relevant regulations and forms can be found at:

- Regulation XIX Academic Appeals

In the first instance, we would urge you to contact your Programme Director who will be able to talk you through the decision making process.

The normal pass mark for an MSc course is 50% (for PG Certificate and Diploma this is 40%). The ordinances and regulations for the programmes are attached and you should ensure that you read and understand them, particularly the rules for compensation, referrals and progression.

- Appeals

Students may appeal against the decision of an Examination Board.

Appeals can normally be made on the basis of perceived procedural irregularities. Please note that appeals on the basis of academic judgement are not allowed.

Students are strongly advised to hold informal discussions with the School of Mathematics about their case for appeal, and the appeal procedures, prior to submission of an appeal.

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Full information about the formal appeal procedures is given in Regulation XIX (Academic Appeals), which is downloadable from the website: [http://www.studentnet.manchester.ac.uk/crucial-guide/academic-life/formal-procedures/academic-appeals/](http://www.studentnet.manchester.ac.uk/crucial-guide/academic-life/formal-procedures/academic-appeals/)

However, you should note that the purpose of this Regulation is to safeguard the interests of all students. It may be used only when there are adequate grounds for doing so (as specified in the Regulation) and may not be used simply because a student is dissatisfied with the outcome of his or her assessment or other decision concerning their academic position or progress.
Complaints

The University of Manchester recognises that students may have legitimate reasons for complaining about their course, the facilities or services provided, or other students or staff. It is hoped that most complaints can be resolved by a student taking up the matter directly with the staff concerned, or with the Head of School. However, it is recognised that this is not always possible and the University’s Student Complaint Procedure is designed to provide students with a fair procedure for resolving complaints that cannot be dealt with by informal means. Further information about the formal complaints procedure is given in Regulation XVIII, which is downloadable from the website:

http://www.studentnet.manchester.ac.uk/crucial-guide/academic-life/formal-procedures/complaints/

Regulation XVIII ‘Student Complaints Procedure’ can be downloaded from:
http://documents.manchester.ac.uk/display.aspx?DocID=1893

- Accommodation Problems

You should consult the Accommodation Office, First Floor, University Place, Oxford Road, ext. 52888, http://www.accommodation.manchester.ac.uk/ with any enquiries relating to your student accommodation.

- Grants and Awards Problems

You should consult Teaching and Learning Office with any queries relating to payment of either tuition fees or maintenance

- Equal Opportunities, Sexual Harassment

Students having problems in these areas should contact the Student Support and Services, John Owens Building (ext. 52071; http://www.manchester.ac.uk/undergraduate/studentlife/studentsupport/)
MSc Actuarial Science

The MSc in Actuarial Science programme is fully accredited by the Institute and Faculty of Actuaries (IFoA), the official professional body of actuaries and the insurance industry in the UK. This entails there are regular meetings between the programme committee and representatives of the IFoA concerning the state and development of the programme. Furthermore students on this MSc programme can earn exemptions for some of the exams that are part of the education towards (fully) qualified actuary offered by the IFoA. In particular, exemptions for the IFoA exams CT3, CT4, CT6 and CT8 are obtained by students who perform satisfactory (currently, 'satisfactory' means an overall average in the taught component of at least 60% and all marks should be at least 50%). Students who don't satisfy these criteria can potentially still be awarded one or more of the above four exemptions provided their performance in the courses relevant for the exemption(s) under consideration is satisfactory. This will be decided on a case by case basis at discretion of the Independent Examiners (representatives of the IFoA). It should be noted that this programme has not been designed with maximising the number of exemptions for students in mind; instead the philosophy is to provide students with a strong and future proof grounding in the mathematics crucial for a modern actuary. More details can be found on the webpage http://www.maths.manchester.ac.uk/study/postgraduate/courses/pgt-courses/actuarialscience1yearmsc/

The programme is suited for those with a good first degree in mathematics or a degree with substantial mathematical content.

The programme combines elements from Mathematical Finance, Statistics and more specialised actuarial topics such as mortality models, risk theory and the use of Bayesian statistics to name a few in order to provide a student with a working knowledge of all the main mathematical techniques and concepts present in modern actuarial practice.

Above and beyond that the program offers an intensive and rigorous education in the probabilistic concepts that are at the core of the topics studied, thus providing a successful student with the mathematical skills and tools necessary to be ready for future developments in the actuarial field as well as to be eligible for a broader range of employment sectors, including for example financial and risk management.

- **Structure of the Programme**

Students take 120cr of courses across 2 semesters (Full Time) or across 4 semesters (Part Time) from the following lists:

**You must select the following courses:**

**Semester 1**
- MATH67001 Martingales with Applications to Finance (15cr)
- MATH68011 Linear Models and Non-Parametric Regression (15cr)
- MATH69511 Actuarial Models (15cr)
- MATH69531 General Insurance (15cr)

Exam Dates: 12th – 23rd January 2015

**Semester 2**
- MATH68032 Time Series Analysis and Forecasting in Finance (15cr)
- MATH68052 Generalized Linear Models and Survival Analysis (15cr)
- MATH69102 Stochastic Modelling in Finance (15cr)
- MATH69542 Risk Theory (15cr)

Exam Dates: 14th May – 3rd June 2015

You must also be registered for your dissertation:
MATH 60000  MSc Dissertation (60cr) due 4 September 2015

and you must undertake the compulsory Induction Module via Blackboard. MATH70000

You will have a total of 180cr for the MSc
MSc in Applied Mathematics

Structure of the programme
Students can take the MSc in Applied Mathematics or alternatively can choose to take one of the structured pathways, leading to an MSc in Applied Mathematics with Numerical Analysis or an MSc in Applied Mathematics with Industrial Modelling.

Students will take 8 taught course units (120 credits) throughout semesters 1 and 2. This will give a broad training in advanced Applied Mathematics. For the MSc in Applied Mathematics there are 5 compulsory units and 3 optional units (chosen from 6 optional courses). For students taking the pathway courses, all 8 taught courses are compulsory.

Dissertations undertaken over the summer can be taken in collaboration with industry and various sponsored projects are available. Choices of dissertations will be made after the January exams. Some of the work undertaken in the transferable skills will then be focused on the areas of importance for the dissertation topic chosen.

Aims of the programme
The aims of the programme are to train students in a broad range of Applied Mathematical Methods and techniques both analytical and computational with a focus on application areas. The aim is that students will pick up a variety of skills of great use for entrance onto a PhD programme or entrance into employment within an industrial sector where knowledge of applied mathematics is of great use.

Emphasis is on engagement with industry where possible and to train students not only to do mathematics but also to gain additional transferable skills of importance in academia and industry. Notably, in the transferable skills unit, students will focus on group work, mathematical modelling problems, communication of work undertaken via written projects and oral presentations and develop their research skills.

Students chose 120cr of courses across 2 semesters (Full Time) or across 4 semesters (Part Time) from the following lists:

You must select the following courses:

Mandatory:

Semester 1
MATH64041  Applied Dynamical Systems (15cr)
MATH 69111  Scientific Computing (15cr)
MATH64051  Mathematical Methods (as MAGIC022) (15cr)

Exam Dates: 12th – 23rd January 2015

Semester 2
MATH64062  PDEs: Theory and Practice (as MAGIC056) (15cr)

Exam Dates: 14th May – 3rd June 2015

Both Semesters:
MATH65740  Transferable Skills for Applied Mathematicians (15cr)

Optional courses:

Semester 1
MATH66101  Numerical Linear Algebra (15cr)
MATH65061  Continuum Mechanics (15cr)
Exam Dates: 12th – 23rd January 2015

**Semester 2**
- MATH66132  Numerical Optimization and Inverse Problems (15cr)
- MATH66052  Approximation Theory and Finite Element Analysis (15cr)
- MATH65122  Transport phenomena and Conservation laws (15cr)
- MATH65132  Stability Theory (15cr)

Exam Dates: 14th May – 3rd June 2015

You must also be registered for your dissertation:

MATH 60000  MSc Dissertation (60cr) due 4th September 2015

You will have a total of 180cr for the MSc.

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**MSc in Applied Mathematics with Industrial Modelling**

Students chose 120cr of courses across 2 semesters (Full Time) or across 4 semesters (Part Time) from the following lists:

You must select the following courses:

**Mandatory:**

**Semester 1**
- MATH64041  Applied Dynamical Systems (15cr)
- MATH69111  Scientific Computing (15cr)
- MATH64051  Mathematical Methods (15cr)
- MATH65061  Continuum Mechanics (15cr)

Exam Dates: 12th – 23rd January 2015

**Semester 2**
- MATH64062  PDEs: Theory and practice (15cr)
- MATH65122  Transport Phenomena and Conservation Laws (15cr)
- MATH65132  Stability Theory (15cr)

Exam Dates: 14th May – 3rd June 2015

**Both Semesters:**
- MATH65740  Transferable Skills for Applied Mathematicians (15cr)

You must also be registered for your dissertation:

MATH 60000  MSc Dissertation (60cr) due 4th September 2015

You will have a total of 180cr for the MSc.
MSc in Applied Mathematics with Numerical Analysis

Students chose 120cr of courses across 2 semesters (Full Time) or across 4 semesters (Part Time) from the following lists:

You must select the following courses:

**Mandatory:**

<table>
<thead>
<tr>
<th>Semester 1</th>
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<tbody>
<tr>
<td>MATH64041</td>
<td>Applied Dynamical Systems (15cr)</td>
</tr>
<tr>
<td>MATH69111</td>
<td>Scientific Computing (15cr)</td>
</tr>
<tr>
<td>MATH64051</td>
<td>Mathematical Methods (15cr)</td>
</tr>
<tr>
<td>MATH 66101</td>
<td>Numerical Linear Algebra (15cr)</td>
</tr>
</tbody>
</table>

Exam Dates: 12th – 23rd January 2015

<table>
<thead>
<tr>
<th>Semester 2</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>MATH64062</td>
<td>PDEs: Theory and practice (15cr)</td>
</tr>
<tr>
<td>MATH66132</td>
<td>Numerical Optimization and Inverse Problems (15cr)</td>
</tr>
<tr>
<td>MATH66052</td>
<td>Approximation theory and Finite Element Analysis (15cr)</td>
</tr>
</tbody>
</table>

Exam Dates: 14th May – 3rd June 2015

**Both Semesters:**

| MATH65740           | Transferable Skills for Applied Mathematicians (15cr)          |

You must also be registered for your dissertation:

| MATH 60000          | MSc Dissertation (60cr) due 4th September 2015                 |

and you must undertake the compulsory Induction Module via Blackboard. MATH70000

You will have a total of 180cr for the MSc.
MSc Mathematical Finance

- **Aims of the programme**

The programme’s primary aim is to provide students with a knowledge and understanding of the main theoretical and applied concepts in the mathematics underlying modern finance theory. The focus of the programme is on mathematical theory and modelling, drawing from the disciplines of probability theory, scientific computing and partial differential equations to model relations between asset prices and interest rates, and to develop models for pricing, risk management and financial product development.

A further programme aim is to develop students’ power of inquiry, critical analysis and logical thinking and to apply theoretical knowledge to current issues of policy and practice. These skills will be essential in carrying out a piece of original empirical research. This research constitutes the final dissertation stage of the Masters programme. To this end, the programme offers high quality teaching informed by theoretical and empirical research and is taught by research-active staff.

Finally, the programme aims to provide a thorough training in financial mathematics to prepare students for careers in areas such as financial engineering, risk and investment management and derivative pricing. It also aims to provide many of the tools required to undertake high quality research in academic and financial institutions [MSc only]. The programme meets the requirements of the national qualifications framework for a level M (Masters) degree.

- **Intended Learning Outcomes of the programme**

Upon completion of the programme, students passing at the MSc level of achievement should be able to demonstrate:

i. Have advanced knowledge and systematic understanding of the main theoretical and applied concepts in mathematical finance including: hedging strategies; binomial model; risk-neutral valuation; diffusion-type models for stock prices; Black-Scholes equation, stochastic volatility models.

ii. Have a comprehensive knowledge and understanding of derivatives and financial engineering.

iii. Have a critical understanding of stochastic calculus and be able to apply stochastic processes in discrete and continuous financial models.

iv. Be able to draw from the disciplines of probability theory, scientific computing and partial differential equations to derive relations between fundamental variables such as asset pricing, market movements and interest rates, which can be used to develop models for pricing, monitoring, risk management and product development.

v. Knowledge and expertise in the development of a research enquiry and to select the tools necessary for executing the research; the skills to pursue independent learning, to analyse and interpret quantitative and qualitative data and to present results in a form that is appropriate.

vi. A critical awareness of research issues, methodologies and methods in mathematical finance, combined with a knowledge of corresponding skills in planning and managing a research project equipping students to carry out a piece of research.
Structure of the Programme

Students chose 120cr of courses across 2 semesters from the following lists:

You must select the following courses:

Semester 1
- MATH67001 Martingales with Applications to Finance (15cr)
- MATH67101 Stochastic Calculus (15cr)
- BMAN70141 Derivative Securities (15cr)
- BMAN70381 Foundations of Finance Theory (15cr)

Exam Dates: 12th – 23rd January 2015

Semester 2
- MATH60082 Computational Finance (15cr)
- MATH67112 Brownian Motion (15cr)
- MATH69102 Stochastic Modelling in Finance (15cr)
- MATH68032 Time Series Analysis and Forecasting in Finance (15cr)

Exam Dates: 14th May – 3rd June 2015

You must also be registered for your dissertation:
- MATH 60000 MSc Dissertation (60cr) due 4 September 2015

and you must undertake the compulsory Induction Module via Blackboard. MATH70000

You will have a total of 180cr for the MSc.
MSc in Pure Mathematics and Mathematical Logic

Students choose 90cr of courses across 2 semesters from the following lists:

Semester 1
MATH61201 Project Semester One
MATH61011 Fourier Analysis and Lebesgue Integration
MATH61051 Introduction to Topology
MATH61061 Differentiable Manifolds
MATH62001 Group Theory
MATH62041 Noncommutative Algebra
MATH62051 Hyperbolic Geometry
MATH62071 Introduction to Number Theory
MATH63001 Predicate Logic
MATH63051 Model theory
MATH62061 Representation Theory

Exam Dates: 12th – 23rd January 2015

Semester 2
MATH61000 Double Project
MATH61002 Linear Analysis
MATH61022 Analytic Number Theory
MATH61072 Algebraic Topology
MATH61082 Riemannian Geometry
MATH61112 Ergodic Theory
MATH61202 Project Semester Two
MATH62112 Lie Algebras
MATH62122 Galois Theory
MATH63012 Computation & Complexity
MATH63042 Gödel’s Theorems

Exam Dates: 14th May – 3rd June 2015

Both Semesters:
MATH61000 Double Project

You must also be registered for your dissertation
MATH61180 MSc Dissertation (90cr) due 4 September 2015

and you must undertake the compulsory Induction Module via Blackboard. MATH70000. Please note that at least 15cr of Project must be taken.

You will have a total of 180cr for the MSc or 120cr for the PG Diploma

Aims of the Programme

The programme aims to: provide you with training in a wide range of modern developments in pure mathematics and mathematical logic; encourage a sophisticated, rigorous and critical approach to mathematics; and to prepare you to follow a career as a professional mathematician in industry and/or research.
**Structure of the Programme**

**Full-time students**

During the first two semesters, you will undertake the taught element of the programme. This comprises of a number of taught course units and project work. Each taught course unit, including the project, is worth 15 credits (except for the double project, which is worth 30 credits). You are free to choose which courses you do, subject to the following:

- You must take 90 credits of taught course units (for the MSc and Diploma programmes) and 60 credits (for the Certificate).
- MSc and Diploma students must write a project in either the first or second semester. If you decide to write the project in the first semester, then you may (subject to approval by the project supervisor and the course director) extend it to a double project in the second semester.

It is recommended that you take 45 credits in each semester. You will have the opportunity to discuss which courses you will take when you meet your personal tutor at the beginning of each semester.

You will make the final decision as to which courses you will take for credit at exam registration.

**Part-time students**

Similar arrangements hold if you are a part-time student. The part-time programme lasts 2 years. You will be expected to study 90 credits of taught material (including a compulsory project) during the 4 semesters, subject to the same restrictions as for full-time students listed above. You will also be expected to write a 90-credit dissertation (for MSc students) or a 30-credit report (for Diploma students).

The exact arrangements will vary for each part-time student, depending on which course units you want to take and any of your other commitments. You will have spoken with the programme director either before commencing the course or during the induction week to decide on which course units you will study and when. For example, you may wish to take two course units in the first two semesters, write your project over the summer of your first year, take another course unit in semester 3, and finally write the dissertation during semester 4 and over the summer of the second year.

**The Project**

You are required to write a project during the taught component of the programme, written under the guidance of your project supervisor. A single project is worth 15 credits. If you write the project during the first semester then, if you and your project supervisor feel that it is going well and you wish to take the subject further, you may extend the project into a 30-credit project, to be written over the two semesters.

Assessment is based primarily on the written project, but a short oral exam will also take place.

More details about the project, such as advice on selecting a topic, the amount of work required, and the method of assessment are given on the project unit's website.

You can also find some informal advice at [http://www.maths.manchester.ac.uk/raag/MSc/MSc.php](http://www.maths.manchester.ac.uk/raag/MSc/MSc.php)

**Dissertations and Reports**

For MSc students the dissertation involves you working closely with a member of staff, normally on a topic of current research interest, and then writing and submitting a dissertation. The dissertation may be expository or
may contain original research. Normally, you will write your dissertation on a topic related to your project (in which case your project supervisor will normally become your dissertation supervisor), but it is possible to write your dissertation in another area, provided suitable supervision is available.

You should discuss your choice of dissertation topic with your personal tutor or with the programme director by the end of the second semester at the latest. You will normally commence work on your dissertation immediately after the May/June examination period, although some preliminary reading may be done during the second semester.

For Diploma students, the report involves writing a more limited account on a topic of mathematical interest. Normally you will write your report on a topic related to that in your project, and your project supervisor will normally supervise your report.
MSc Statistics

- **Aims of the programme**

The M.Sc. programme in statistics offers students thorough, professional and high quality training in statistics, thus preparing them for work as statisticians in a range of areas including business, industry, education, medicine as well as government and scientific research establishments.

Through the pathway structure, the emphasis is on providing a good general coverage of the subject together with additional, more specialist instruction in certain areas. The principal strength of the programme is that training is given in the practical side of the subject at the same time as providing a thorough appreciation of the theory underpinning the methodology. The main general aims are to develop each student’s understanding of statistical theory and methodology, enable them to solve substantial and realistic statistical problems and to communicate effectively the findings and results.

- **Intended Learning Outcomes of the programme**

On successful completion of the course students will:

- have specialized knowledge and understanding of selected statistical topics at an advanced level which take into account recent advances in the subject;

- use acquired knowledge and skills to enable them to apply and adapt statistical methodology and modelling techniques to real-life problems in both observational and designed studies and communicate the results of them clearly;

- have an appreciation of the general principles of statistical inference and their implications in data analysis;

- have acquired and shown skills in completing an extended individual study of a statistical problem and of presenting the results in a dissertation;

- have developed attitudes and confidence which will allow them to acquire new statistical knowledge and expertise throughout their future careers in statistics.

- **Structure of the Programme**

The MSc programme in Statistics allows students to take one of three different MSc degrees, depending on their interests and career aspirations. These are the main programme in Statistics and an associated pathway in Financial Statistics. Each one is built around a common core of five modules and then students study an additional set of three specialist modules to make a total of eight in all.

**MSc in Statistics**

Students take 120cr of courses across 2 semesters (Full Time) or across 4 semesters (Part Time) from the following lists:

You must select the following courses:

Mandatory: Semester 1
MATH68001  Statistical Inference (15cr)
MATH68011 Nonparametric Regression (15cr)
MATH68091 Statistical Computing (15cr)
MATH68061 Multivariate Statistics (15cr)
Exam Dates: 12th – 23rd January 2015

Mandatory: Semester 2
MATH68052 Generalised Linear Models and Survival Analysis (15cr)
MATH68132 Longitudinal Data Analysis (15cr)
MATH68122 Markov Chain Monte Carlo (15cr)
MATH68082 Design and Analysis of Experiments (15cr)
Exam Dates: 14th May – 3rd June 2015

MATH60000 Dissertation (16cr): due 4th September 2015

and you must undertake the compulsory Induction Module via Blackboard. MATH70000

You will have a total of 180cr for the MSc.

MSc in Statistics (Financial Statistics)

Students take 120cr of courses across 2 semesters (Full Time) or across 4 semesters (Part Time) from the following lists:

You must select the following courses:
Mandatory: Semester 1
MATH68011 Nonparametric Regression (15cr)
MATH68091 Statistical Computing (15cr)
MATH68191 Statistical Modelling in Finance (15cr)
MATH68181 Extreme Values and Financial Risk (15cr)
Exam Dates: 12th – 23rd January 2015

Mandatory: Semester 2
MATH68052 Generalised Linear Models and Survival Analysis (15cr)
MATH68132 Longitudinal Data Analysis (15cr)
MATH68122 Markov Chain Monte Carlo (15cr)
MATH68032 Time Series Analysis and Forecasting in Finance (15cr)
Exam Dates: 14th May – 3rd June 2015

MATH60000 Dissertation (60cr): due 4th September 2015

and you must undertake the compulsory Induction Module via Blackboard. MATH70000

You will have a total of 180cr for the MSc.
Health and Safety

Primary medical care of students is provided by the National Health Service through individual registration of students with a local general practice of their choice.

- The Student Counselling Service provides confidential, individual counselling for all work related difficulties, exam anxiety, stress and other personal problems. The service is located on the Fifth Floor of Crawford House, and can be contacted by dialling 0161 275 2864. The e-mail address is counsel.service@manchester.ac.uk. Further information can be found at the following website:

http://www.manchester.ac.uk/counselling

You should ensure that you are acquainted with the various Safety Regulations and, in particular, the correct procedure in the event of a fire. The School’s Health and Safety Policy is available via the School intranet: https://www.maths.manchester.ac.uk/intranet/ you should ensure that you read and understand this document.

The University’s Health and Safety web address is:
http://www.campus.manchester.ac.uk/healthandsafety/index.htm

- Fire Safety

Fire is a ubiquitous hazard that affects everybody in the University. In general, the risk of a fire starting in an office environment where there is a no smoking policy is very low. However, everyone should make every effort to prevent it from occurring, for example, by reporting electrical defects, accumulations of combustible materials, or evidence of covert smoking.

The School procedure in the event of a fire or other emergency is that everybody is to leave the building promptly using the stairs and the nearest exit, and assemble at the assembly area, which is next to the University Place. Following an evacuation, do not re-enter the building unless instructed it is safe to do so by Fire Service personnel or university security staff.

The alarm system is tested every Monday afternoon at 13.50. There is no need to evacuate the building on these occasions, although reports of alarms that are too faint, or where the meaning of the alarm is not clear, should be made immediately to the School Safety Adviser (SSA), Mr Tony McDonald.

Anybody who has difficulties responding in an emergency evacuation situation should discuss this with the SSA.

- Fire Information

If the fire alarm sounds continuously, then the building must be evacuated immediately by the nearest exit. Lifts must not be used. The fire alarm system will cause all lifts to travel to the ground floor where the doors will open to allow any occupants to exit. The doors will then close and will remain in that state until overridden by the fire brigade, or until the system is reset.

Pulsed sounders mean there is no need to evacuate, but be prepared to evacuate should the sounders change to continuous. (Pulsed sounders are not a signal to evacuate, but serve as an indication of a fire alarm in the adjacent building.)

Anybody who would have difficulty leaving the building via the staircases during an evacuation should make their way to one of the landing areas in the stairwells, where there are marked refuge areas. An intercom station is located there that communicates with a station situated in the reception area. This will enable the location to be established and assistance provided to exit the building. Please inform the SSA if you may need this type of assistance.
• Disabled Toilet Alarms

All alarms are activated by a red pull-cord switch. This sounds a local alarm as well as illuminating a red light outside the cubicle. An alarm will also sound on a control panel in the reception area.

The alarm can be reset locally by pressing the RESET button in the cubicle.

• First Aid

If you need to use the First Aid services listed below, please use the nearest one to where you are.

<table>
<thead>
<tr>
<th>Location</th>
<th>Arrangements</th>
</tr>
</thead>
<tbody>
<tr>
<td>Oxford Road end of campus</td>
<td>From local first aiders (see table below).</td>
</tr>
<tr>
<td>In an emergency and outside working hours</td>
<td>Contact Security (telephone 69966)</td>
</tr>
</tbody>
</table>

• Health and Safety Staff (First Aiders)

<table>
<thead>
<tr>
<th>Role</th>
<th>Name</th>
<th>E-mail Address</th>
<th>External Number</th>
<th>Mobile Number</th>
<th>Location</th>
</tr>
</thead>
<tbody>
<tr>
<td>First Aider</td>
<td>Mrs. Francesca Moss</td>
<td><a href="mailto:Francesca.Moss@manchester.ac.uk">Francesca.Moss@manchester.ac.uk</a></td>
<td>0161 275 5899</td>
<td>-</td>
<td>Alan Turing, G.204</td>
</tr>
<tr>
<td>First Aider</td>
<td>Miss Karen Morris</td>
<td><a href="mailto:Karen.Morris-2@manchester.ac.uk">Karen.Morris-2@manchester.ac.uk</a></td>
<td>0161 275 5797</td>
<td>-</td>
<td>Alan Turing, G.204</td>
</tr>
<tr>
<td>First Aider</td>
<td>Mr. Sebastian Rees</td>
<td><a href="mailto:Sebastian.Rees@manchester.ac.uk">Sebastian.Rees@manchester.ac.uk</a></td>
<td>0161 275 5812</td>
<td>-</td>
<td>Alan Turing, 1.205</td>
</tr>
</tbody>
</table>

First Aid boxes are situated at the Alan Turing Building Attendants’ Lodge.

Additional Occupational Health Services for Staff and Students are located at 182-184 Waterloo Place, near the University Precinct Centre, Telephone 0161 275 2858. (First Aid is not provided here.)

http://www.campus.manchester.ac.uk/healthandsafety/studentOH.htm#services

If an ambulance is required, it can be summoned by dialling 9 999 from any telephone. Make sure you inform the Building Attendants so that they can direct the medical personnel to the incident.

It should be noted that all university work places are designated as non-smoking and it is illegal to smoke within University buildings and enclosed space.

Any damage to a building or other defects must be reported to the SSA immediately. If the SSA is not available, inform one of the Building Attendants.

Some students have disabilities which would hinder their escape from a building in case of emergency, while others may have hearing difficulties which impair their ability to notice emergency alarms. The School makes prior arrangements for the safety in emergency situations of any of its students with a disability and it is important that students know precisely what they should do, and with whose help in an emergency such as a fire evacuation.

Students with disabilities should introduce themselves to the School Disability Coordinator (Tracie Mcarther Room G.204, Alan Turing Building) as soon as possible after arrival and in any case within the first week, and confirm the arrangements that have been made for their safety.
If you have an accident when you are on University premises then you must inform Mr Tony McDonald or the staff in the PG Office (behind reception on the ground floor of the Alan Turing Building).

- **Buildings**

The buildings are open from 8.30am to 5.30pm weekdays. Graduate students who are working very late or at weekends are advised to notify the Security Office (ext. 52728). The vicinity of the buildings should not be considered completely safe at night, particularly for unaccompanied women.

In accordance with University policy, smoking is prohibited throughout the buildings, within any door entrance or access ramp.

- **Useful web addresses**

The University Health and Safety Web Site can be found at:  
http://www.campus.manchester.ac.uk/healthandsafety/  
Here you will find useful information about Health and Safety within the University, along with the University's Health and Safety Policy

Counselling for help and advice on personal matters:  
http://www.sos.eps.manchester.ac.uk/support/atoz/counselling.html

Disability Support – Help for disabled students http://www.staffnet.manchester.ac.uk/personalsupport/disability/
Central Services

- **Student Services Centre**

  The Student Services Centre (SSC) is the main point of contact for most of the administrative tasks you need to carry out during your time here as a student, including registration, assessment and payment of tuition fees, issue of swipe cards, examinations information and timetabling, student loan and grant enquiries, financial assistance, issue of official documents (such as academic transcripts, certificates, confirmation of award letters, Council Tax exemption certificates), and enquiries about graduation. The SSC is located on Burlington Street. The Student Services Centre is open five days a week from 10 am to 4 pm. The contact details for the Student Services Centre are:
  
  Tel: 0161 275 5000.
  E-mail: ssc@manchester.ac.uk

- **Crucial Guide**

  The Crucial Guide contains essential advice, information and guidance for students at the University of Manchester. It covers academic life (including disability support, advice for international students and examination timetables), financial life (including tuition fees, student loans and scholarship information), city life, personal life (including advice on how to manage ill health and cope with personal and academic problems) and university life. The Crucial Guide Live can be found at the website:
  
  http://www.studentnet.manchester.ac.uk/crucial-guide/

- **Students’ Union Advice Centre**

  The Students’ Union Advice Centre is similar to a Citizens Advice Bureau, although there is greater emphasis on those problems that particularly affect students. It can offer advice on finance and housing, for example, as well as advice on areas relating to International (non-EU) students (such as visa and immigration problems).

  The Students’ Union Advice Centre is located on the first floor of the Steve Biko Building (Students’ Union Building on the Oxford Road site). It is open from 9.30 am to 4:30 pm on Monday to Friday. **Tel: 0161 275 2947.** Further information can be found at the website:
  
  http://manchesterstudentsunion.com/

- **Disability Support Office**

  Students wishing to be considered for disability support provision in relation to their studies should contact the University’s Disability Support Office (DSO). The DSO can organise a wide range of individual practical support and can assist you to access external resources like the Disabled Students Allowance. The DSO is situated on the second floor of University Place, Block 2. **Tel: 0161 275 7512 / 8518.** The e-mail address is dso@manchester.ac.uk. Further information can be found at the following website:
  
  http://www.studentnet.manchester.ac.uk/crucial-guide/academic-life/support/disabled-students/

- **Accommodation Office**

  The Accommodation Office, located on the first floor of University Place, is responsible for all Halls of Residence and University Leased Houses. It can also offer advice, including legal rights for tenants.
  
  **Tel: 0161 275 2888.**
  E-mail: accommodation@manchester.ac.uk
  Website: http://www.accommodation.manchester.ac.uk
Manchester Student Homes is an Accommodation Bureau. It assists students with private sector accommodation. You can view property details by visiting Manchester Student Homes, which is located in Unit 1-3, Ladybarn House, Moseley Road, Fallowfield, Manchester M14 6ND (Tel: 0161 275 7680).

Alternatively, Manchester Student Homes provides students with a free, online, Virtual Housing Bureau. Comprehensive details of thousands of properties are provided on Manchester Student Homes' website at: http://www.manchesterstudenthomes.com

- **Careers Service**

  The Careers Service is located in Crawford House on Booth Street East (Tel: 0161 275 2828). The Careers Service gives careers guidance and provides details of jobs available for graduates. Comprehensive careers and employer information can be found at the website: http://www.careers.manchester.ac.uk/

  The Careers Service can also provide advice on finding work experience, as well as details of relevant work experience schemes and sources of vacancies. As well as providing extra funding, work experience will help you develop the personal work-related skills critical to your career success, test your ability and knowledge in a real work setting, demonstrate your skills to potential future employers and add valuable experience to your CV. Further information about work experience can be found at the website: http://www.careers.manchester.ac.uk/experience/

  Contact details for some other useful student support services are listed below:

- **Childcare**

  There are two nurseries associated with the University. Their contact details are:
  
  Dryden Street Nursery, Chorlton-on-Medlock, Manchester M13 9AU.
  
  Tel: 0161 272 7121
  E-mail: admin.drydenstreetnursery@btconnect.com
  
  Echoes Nursery, Echo Street (off Granby Row), Manchester M60 1QD.
  Tel: 0161 306 4979
  E-mail: network.nurseries@lineone.net

  Further information for student-parents may be found at the website: http://www.studentnet.manchester.ac.uk/crucial-guide/personal-life/student-parents/

- **Mature Students**

  The Burlington Society is the University society for mature and postgraduate students. It is based in the Burlington Rooms, next to the John Rylands University Library. The Students’ Union also has a dedicated Mature Students and Postgraduate Students Adviser, whom you can approach about any concerns or issues. Further information for mature students may be found at the website: http://www.manchester.ac.uk/study/undergraduate/mature-students/meeting-adult-learners/

- **Nightline**

  This is a confidential listening and information service (run by the Students’ Union), offering a point of contact through the night in semester time.
  
  Tel: 0161 275 2983/4
  (The number is on the back of your library card.)

- **Religious Support**
Details of services, facilities and all places of worship (Christian and non-Christian) adjacent to the University are available at:
St. Peter’s Chaplaincy
St. Peter's House
Precinct Centre, Oxford Road.
Tel: 0161 275 2894
E-mail: sph.reception@man.ac.uk
Website: http://www.stpeters.org.uk/
APPENDIX 1:

Guidance to Students on Plagiarism and other forms of Academic Malpractice.

Introduction

As a student, you are expected to cooperate in the learning process throughout your programme of study by completing assignments or undertaking research of various kinds that are the product of your own study or research. For most students this does not present a problem, but occasionally, whether unwittingly or otherwise, a student may commit what is known as plagiarism or some other form of academic malpractice when carrying out an assignment. This may come about because students have been used to different conventions in their prior educational experience or through general ignorance of what is expected of them.

This guidance is designed to help you understand what we regard as academic malpractice and hence to help you to avoid committing it. You should read it carefully, because academic malpractice is regarded as a serious offence and students found to have committed it will be penalised. For MSc students, this could lead to you being excluded from your programme of study and withdrawn from the University without the award of a degree.

Academic malpractice includes plagiarism, collusion, fabrication or falsification of results and anything else intended by those committing it to achieve credit that they do not properly deserve. You should take note that work you submit may be screened electronically to check against other material on the web and in other submitted work.

- Plagiarism

Plagiarism is presenting the ideas, work or words of other people without proper, clear and unambiguous acknowledgement. It also includes ‘self-plagiarism’ (which occurs where, for example, you submit work that you have presented for assessment on a previous occasion), and the submission of material from ‘essay banks’ (even if the authors of such material appear to be giving you permission to use it in this way). Obviously, the most blatant example of plagiarism would be to copy another student’s work. Hence it is essential to make clear in your assignments the distinction between:

- the ideas and work of other people that you may have quite legitimately exploited and developed, and
- the ideas or material that you have personally contributed

To assist you, here are a few important do’s and don’ts:

Do get lots of background information on subjects you are writing about to help you form your own view of the subject. The information could be from electronic journals, technical reports, unpublished dissertations, etc. Make a note of the source of every piece of information at the time you record it, even if it is just one sentence.

Don’t construct a piece of work by cutting and pasting or copying material written by other people, or by you for any other purpose, into something you are submitting as your own work. Sometimes you may need to quote someone else’s exact form of words in order to analyse or criticize them, in which case the quotation must be enclosed in quotation marks to show that it is a direct quote, and it must have the source properly acknowledged at that point. Any omissions from a quotation must be indicated by an ellipsis (…) and any additions for clarity must be enclosed in square brackets, e.g. “[These] results suggest… that the hypothesis is correct.” It may also be appropriate to reproduce a diagram from someone else’s work, but again the source must be explicitly and fully acknowledged there. However, constructing large chunks of documents from a string of quotes, even if they are acknowledged, is another form of plagiarism.
Do attribute all ideas to their original authors. Written ‘ideas’ are the product that authors produce. You would not appreciate it if other people passed off your ideas as their own, and that is what plagiarism rules are intended to prevent. A good rule of thumb is that each idea or statement that you write should be attributed to a source unless it is your personal idea or it is common knowledge. (If you are unsure if something is common knowledge, ask other students in the same or similar research group: if they don’t know what you are talking about, then it is not common knowledge!)

As you can see, it is most important that you understand what is expected of you when you prepare and produce assignments and that you always observe proper academic conventions for referencing and acknowledgement, whether working by yourself or as part of a team. In practice, there are a number of acceptable styles of referencing depending, for example, on the particular discipline you are studying, so if you are not certain what is appropriate, ask your supervisor! This should ensure that you do not lay yourself open to a charge of plagiarism inadvertently, or through ignorance of what is expected. It is also important to remember that you do not absolve yourself from a charge of plagiarism simply by including a reference to a source in a bibliography that you have included with your report or thesis; you should always be scrupulous about indicating precisely where and to what extent you have made use of such a source.

So far, plagiarism has been described as using the words or work of someone else (without proper attribution), but it could also include a close paraphrase of their words, or a minimally adapted version of a computer program, a diagram, a graph, an illustration, etc taken from a variety of sources without proper acknowledgement. These could be lectures, printed material, the Internet or other electronic/AV sources.

Remember: no matter what pressure you may be under to complete an assignment, you should never succumb to the temptation to take a ‘short cut’ and use someone else’s material inappropriately. No amount of mitigating circumstances will get you off the hook, and if you persuade other students to let you copy their work, they risk being disciplined as well (see below).

- **Collusion**

Collusion is any agreement to hide someone else’s individual input to collaborative work. Where proved, it will be subject to penalties similar to those for plagiarism. Similarly, it is also collusion to allow someone to copy your work when you know that they intend to submit it as though it were their own and that will lay both you and the other student open to a charge of academic malpractice.

On the other hand, collaboration is a perfectly legitimate academic activity in which students and researchers are required to work together. For published research, this often leads to joint papers which have multiple authors. Joint papers or research done in collaboration with others is acceptable in your PhD thesis, but you should always check with your supervisor as to how this work should be credited.

- **Fabrication or falsification of results**

For some students, a major part of their studies involves laboratory or other forms of practical work, and they often find themselves undertaking such activity without close academic supervision. If you are in this situation, you are expected to behave in a responsible manner, as in other aspects of your academic life, and to show proper integrity in the reporting of results or other data. Hence you should ensure that you always document clearly and fully any research programme or survey that you undertake, whether working by yourself or as part of a group. Results or data that you or your group submit must be capable of verification, so that those assessing the work can follow the processes by which you obtained them. Under no circumstances should you seek to present results or data that were not properly obtained and documented as part of your practical learning experience. Otherwise, you lay yourself open to the charge of fabrication or falsification of results.

Finally…

If you commit any form of academic malpractice, academic staff will not be able to assess your individual abilities objectively or accurately. Any short-term gain you might have hoped to achieve will be cancelled out by the loss of proper feedback you might have received, and in the long run such behaviour is likely to damage your overall
intellectual development, to say nothing of your self-esteem and, potentially, your future professional reputation. You will be the one who loses.
APPENDIX 2

Staff Contact Details
http://www.maths.manchester.ac.uk/info/staff-list.html
APPENDIX 3

Ownership of Intellectual Property Rights (IPR) (including copyright) in material produced by staff and students

For details of the University’s policy on this matter visit the website:

http://www.ipresource.manchester.ac.uk/understandingip/universitypolicy/policy/ip_policy.html
APPENDIX 4
Degree Regulations - Postgraduate Taught Degree Regulations 2012

Note: Faculty approved variances to the Degree Regulations will be described within the Programme Handbooks. Where they exist they will take precedence, for example, in order to comply with Professional, Statutory and Regulatory Bodies (PSRBs).


REGULATIONS
A. Credit and Award Framework

1. All awards of the University of Manchester will be given on the basis of the accumulation of credit as mapped out in table 1. This table is based on the credit/awards and levels required by the national Framework of Higher Education Qualifications (FHEQ):

Table 1: Credit and Postgraduate Award framework:

<table>
<thead>
<tr>
<th>Name of Award</th>
<th>Minimum credit for the award</th>
<th>ECTS</th>
<th>Minimum credits at the level of qualification</th>
<th>ECTS</th>
<th>FHEQ level</th>
</tr>
</thead>
<tbody>
<tr>
<td>Masters (2 Year)</td>
<td>360</td>
<td>180</td>
<td>240</td>
<td>120</td>
<td>7</td>
</tr>
<tr>
<td>Masters (1 Year)</td>
<td>180</td>
<td>90</td>
<td>150</td>
<td>75</td>
<td>7</td>
</tr>
<tr>
<td>Postgraduate Diploma</td>
<td>120</td>
<td>60</td>
<td>90</td>
<td>45</td>
<td>7</td>
</tr>
<tr>
<td>Postgraduate Certificate</td>
<td>60</td>
<td>30</td>
<td>40</td>
<td>20</td>
<td>7</td>
</tr>
<tr>
<td>Post Graduate Certificate in Education (PGCE)</td>
<td>60</td>
<td>30</td>
<td>40</td>
<td>20</td>
<td>7</td>
</tr>
</tbody>
</table>

Note 1: the table refers to the levels as defined in the FHEQ. It may be of assistance to the reader to understand that Level 7 of the FHEQ relates to a Master's programme. Note 2: One ECTS (European Credit Transfer System) is equivalent to two UK credits.

2. All students who exit prior to completion of the programme on which they registered will receive an exit award if they have achieved the appropriate amount of credit in accordance with that award, as specified in table 1, within 5 years of their initial registration.

3. A student must achieve the minimum amount of credit at the level of the qualification in accordance with table 1. However, (subject to the programme requirements) students can take credit at a higher or lower level in order to achieve the minimum credit for the award.

B. Title of Taught Awards

4. Titles of degrees can be found in the University’s Regulation XI “Titles of Degrees and other Distinctions” at: http://documents.manchester.ac.uk/studentrelatedlist.aspx

C. Accreditation of Prior Learning - AP(E)L

5. A maximum time limit of 5 years should apply between award and consideration of AP(E)L.

6. Where the Postgraduate Certificate is a standalone programme, AP(E)L will be permitted up to a maximum of 15 credits. Where the Postgraduate Diploma is a standalone programme, AP(E)L will be permitted for up to a
maximum of 45 credits. For a Masters award, the maximum amount of credits which can be permitted for AP(E)L is 60.

7. Students exiting with a Postgraduate Diploma (or Postgraduate Certificate) may be permitted to rescind this award and ‘upgrade’ to a Masters (or Postgraduate Diploma) by successfully completing the appropriate further component of the programme providing the following conditions are met:
   - The rescinding occurs within five years of the student’s initial registration, subject to the programme still being available.
   - An overall pass, at the appropriate standard to assure admission to a master’s programme, was obtained for the Postgraduate Diploma (or Postgraduate Certificate) including any capped or compensated grades.

8. Students can receive an exit award if they have AP(E)L credit in their profile, providing their performance in University of Manchester also satisfies the award requirements in table 1 and at least half of the credits have been awarded by the University of Manchester.

9. Schools may stipulate when AP(E)L is not allowed due to Professional Body requirements.

D. Assessment and Credit Accumulation

10. Where students are required to progress to a research element including a ‘dissertation’ or similar, the programme handbook must state the minimum requirements for progression to this element of the programme.

11. Where a student has failed more than the required credits on the first attempt or fails to qualify for a final award after compensation, referrals or the consideration of mitigation, the Examination Board has the following options at its discretion:
   - Award Exit Award if criteria are met in accordance with table 1.

12. Schools may have alternative assessment regulations where these are required by Professional, Statutory and Regulatory Bodies (PSRBs).

E. Compensation

13. The compensation zone is defined by the standard unit marking scheme for postgraduate taught students.

14. PGT programmes can be compensated up to 30 credits for PG Diploma/ Masters and 15 credits for a PG Certificate.

15. Compensation can only be applied up to the maximum amount specified in E14. Beyond this maximum threshold, the Examination Board will make a decision on which reassessment can be taken.

16. Schools can specify when a unit is not compensatable or when PSRB rules take precedent.

17. Compensated credit retains the original failed mark and this is used in the weighted average for the calculation of the final classification/ award.

18. Referral marks are compensatable.

F. Reassessment

19. Where the overall unit mark is below the compensation zone or the number of compensatable fails has been exceeded, reassessment may be taken, within the credit limitations set out in F23. Reassessment as a result of a fail is known as a ‘Referral’. Subsequent attempts as a result of approved and verified mitigating circumstances are known as ‘Deferrals’.
20. The reassessment must be designed to assess the achievement of the same intended learning outcomes but need not be of the same form as that originally used. The reassessment will normally take place in the same academic year as the original assessment to enable the students to progress as originally intended.

21. If an Examination Board has documented evidence that, (a) a student's work or attendance or both have been unsatisfactory, and (b) the student has been formally warned of the unsatisfactory work or attendance but has not shown significant improvement acceptable to the Board, then the Board has the right to refuse the student reassessment. See ordinances/regulation XX - Work and Attendance of Students.

22. An Examination Board may allow a student one attempt, per unit, at reassessment (two attempts in total). This principle does not apply to attempts with approved and verified mitigating circumstances.

23. Postgraduate programmes can be referred in up to half of the taught credits; this includes credits on a PG Certificate or PG Diploma award. Students may also resubmit the dissertation (or equivalent, see F 24) on one occasion.

24. When the referred assessment for a postgraduate student includes independent work such as a dissertation or project resubmission, they should be permitted a reasonable amount of time within a maximum of 6 calendar months from the date of the Examination Board. This reassessment of a research/dissertation element does not contribute to the credit limitations set out in F23.

25. Referrals are capped at the lowest compensatable fail mark and this is used in the weighted average mark for the final award. The capped mark is applied to the unit level mark, not just the failed element.

26. When a student is referred and fails a unit that was previously in the compensated zone, the first mark stands.

27. Students may, in exceptional circumstances, at the discretion of the Examination Board, be allowed to repeat whole units or the entire programme, subject to teaching capacity not being exceeded.

G. Exit Awards

28. Once a student has exhausted all the opportunities to retrieve referred assessment they will be given an exit award in accordance with table 1 and as defined in the Programme Specification.

29. If a student decides to withdraw, they will automatically be awarded the relevant exit award in accordance with table 1 and as defined in the Programme Specification.

H. Classification in postgraduate taught programmes

Note: H33 should be agreed and applied consistently across a School. Approval should be sought at School and Faculty level and carefully articulated to the students within that School. For joint programmes, the ‘Lead School’s model will apply.

30. For the award of pass a student must satisfy the minimum credit requirements specified in Table 1.

31. Classifications for merit and distinction will be calculated on the basis of an average mark, based on the weighted programme as a whole.

32. In order to achieve the award of pass, merit or distinction, a student must have passed the requisite minimum credits listed in Table 1 in accordance with the unit marking scheme and mark descriptors.

33. In addition, School may decide to add a further requirement to gain the award of Distinction. Students must achieve an average, of 70% or above in both the taught element and the dissertation.

34. Students with credit awarded as a result of a referral or compensated mark will not be eligible for the award of distinction, only a merit or a pass.
35. Decisions with regards to ‘borderline’ classifications for individual students should be resolved using the mechanisms outlined in appendix A.

I. Examination Board Arrangements

36. There are normally three available assessment opportunities; January, May/June and Aug/September within each academic year. It is expected that all reassessment will take place in the academic year in which the assessment was first attempted, exceptions can be made for programmes with ‘non-standard’ admissions cycles.

37. There must be an opportunity at the end of every unit of assessment, for a chaired forum to make decisions regarding student’s attainment on completed units.

38. Examination Boards, to agree student minimum requirement for the achievement of an award, will take place at appropriate points in each academic year, overseen by an External Examiner. Exceptions can be made for programmes with ‘non-standard’ assessment cycles.

Appendix A Postgraduate Degree Classification Scheme

This scheme should be used in conjunction with ‘Table 1 of the Postgraduate Taught Degree Regulations’. This table has been extracted from the Framework for Higher Education Qualifications, and students must meet the credit requirements of Table 1, prior to the classification being calculated, using the thresholds and boundaries below:

Weightings

Postgraduate degree classification for the award of merit and distinction are based on the weighted average mark across the programme calculated to one decimal place, where marks for individual course units are recorded as whole numbers (see section H).

Stage 1: Classification Thresholds and Boundaries

The following boundaries inform classification when the total points falls below a classification threshold.

Table A1 Postgraduate Master’s degree classification and boundary zone using total points 0-100 mark range:

<table>
<thead>
<tr>
<th>PG Degree classification- Masters based on 180 credits</th>
<th>Classification thresholds: average mark (mark range 0 to 100)</th>
<th>Boundary zone average</th>
<th>Boundary Zone H33 (separating the average for taught and research elements)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Distinction</td>
<td>70.0</td>
<td>68.0 to 69.9</td>
<td>Either taught or research is 70.0 or above, while the other is between 68.0 to 69.9</td>
</tr>
<tr>
<td>Merit</td>
<td>60.0</td>
<td>58.0 to 59.9</td>
<td>NA</td>
</tr>
<tr>
<td>Pass</td>
<td>59.9 or less providing the credit requirements of Table 1 in the ‘Credit and Award Framework’ have been met.</td>
<td>NA</td>
<td>NA</td>
</tr>
</tbody>
</table>

Consideration of postgraduate masters students within the boundary zone by mark distribution

The following process applies to reach decisions on borderline cases:
After allowances have been made for mitigating circumstances, a student whose total mark at the first assessment is within the boundary zone specified above, must be considered for the higher award as long as the following are satisfied (see also notes on AP(E)L):

- For the award of distinction, all course units must have been passed at the first attempt without any compensation.
- 120 out of 180 credits are equal to/ or higher than the final award.

Where Schools have decided to implement H33, after allowances have been made for mitigating circumstances, decisions at the boundary of a ‘Distinction’, should be made as long as the following are satisfied (see also notes on AP(E)L):

- For consideration of a student in the boundary zone for the award of distinction, the student should have passed either the ‘taught’ or ‘research’ element at the level of a ‘distinction’ and the other element must be in the boundary zone, as defined in table A1.
- All course units must have been passed at the first attempt without any compensation.
- Either the overall average is equal to or above 70.0; or 120 out of 180 credits are equal to or above 70.0.

Stage 2: Mark Review

If a student is in the boundary zone and does not satisfy the additional criteria, Schools may apply a further stage of ‘Mark Review’ by asking the External Examiner to oversee a review of the marks of submitted work.

Taught Masters Postgraduate Diploma and Postgraduate Certificate degree classification scheme using 0-100 mark range

Award of Postgraduate Diploma and Postgraduate certificate degree is based upon credit accumulation using a pass mark of 40% (see table 1 for credit requirements) for which there is no classification other than pass/fail.

Regulations: Postgraduate Taught Degrees
September 2012

Note: Faculty approved variances to the Degree Regulations will be described within the Programme Handbooks. Where they exist they will take precedence, for example, in order to comply with Professional, Statutory and Regulatory Bodies (PSRBs).

Please see also the Guide to the Postgraduate Taught Degree Regulations 2012

APPENDIX 5

Regulation XX - Work and Attendance of Students

[Note: the set of units, practical work and projects required for a degree or other award of the University is referred to as a programme of study (the ‘Programme’). Each such Programme is normally the responsibility of a School (which may also be acting on behalf of a group of Schools), which appoints a body to organise the syllabus, and the teaching and assessment of students. In this Regulation, this body is designated by the term ‘Programme Committee’, recognising that the exact form and title will vary across the University.]

1. The following scheme has been approved by the Senate to determine, subject to the provisions of Regulation XII.9, whether or not a student is working on and attending a Programme satisfactorily for the purposes of Statute XXI.4, and to set out the penalties for failure to work and attend satisfactorily.

2. Individual Schools shall determine the requirements for the work and attendance of students on the Programme to be judged satisfactory. A clear statement of the specific and compulsory requirements for satisfactory work and attendance on the Programme must appear in the Programme Handbook for students, accompanied by a statement of the consequences of failing to meet such requirements.

3. Requirements for work and attendance may include attending lectures, seminars, laboratory classes, field trips, academic and personal tutorials, and other events or meetings concerned with the conduct of the course and progress of students, as well as meeting the specified due dates for the submission of work for comment or assessment, and attending examinations, tests, or other forms of assessment. Schools may rule that students who are late for lectures, seminars, tutorials, practical and other classes may be refused admission to those classes, and that persistent lateness may be deemed to be unsatisfactory attendance.

4. Absence from compulsory classes must be authorised by the appropriate School authority and students are required to provide appropriate certification for absence caused by illness.

5. The Programme Committee shall keep under continuous review throughout the academic year the work and attendance of students for whom it has responsibility under this Regulation.

6. As part of this review, the Programme Committees shall:
   (a) obtain evidence on the progress of students by means of examinations, tests, coursework, reports or such other means of assessment as it considers appropriate; and
   (b) monitor the attendance of the students by such means that it considers to be appropriate.

7. If at any time a Programme Committee has reason to believe that a student’s work and attendance does not at that stage meet the specified requirements, or that he or she may not meet them unless there is an improvement, it shall issue a formal written warning to the student stating the actions he or she is required to take in order to effect the necessary improvement. The warning shall state that unless the student complies with the actions specified, a decision may be taken by the Committee to refuse the student permission to take the examinations or other assessments for the element(s) of the Programme concerned, with the consequence that he or she may be excluded from the Programme.

8. A student who receives due warning in writing that his or her work and attendance is unsatisfactory shall be offered the opportunity to appear in person before the Programme Committee to explain the reasons for non-compliance. A written note of the meeting, stating any modifications to the actions he or she is required to take, shall then be issued to the student.

9. If the student fails to comply with such requirements, the Programme Committee may decide to refuse the student permission to take the relevant examinations or other assessments, with the consequence that he or she will be excluded from the Programme. The Programme Committee shall send notification of decision forthwith to the student’s registered home and study time addresses. A copy of the notification shall also be sent to the Registrar and Secretary.
[Note: In instances where the Programme Committee is satisfied that circumstances exist which show good cause for the student’s failure to comply with the work and attendance requirements, alternative action may be determined, such as interruption from the programme of study for a specified period of time.]

10. No student shall be refused permission to take an examination or other form of assessment on the grounds of unsatisfactory work and attendance unless the warning referred to in paragraph 7 above has been issued.

11. A student who has been refused permission to take an examination or other form of assessment on the grounds of unsatisfactory work and attendance may submit an appeal against that decision within ten working days of the notification of the decision in accordance with the provisions of Regulation XIX [Academic Appeals].

12. In order to allow sufficient time for completion of the procedure described in paragraph 11 above, the latest date upon which notification of a refusal may be issued is the last teaching day of the second semester prior to the Easter
APPENDIX 6

External Examiners 2014-2015

External examiners are individuals from another institution or organisation who monitor the assessment process of the University to ensure fairness and academic standards. They ensure that assessment and examination procedures have been fairly and properly implemented and that decisions have been made after appropriate deliberation. They also ensure that standards of awards and levels of student performance are at least comparable with those in equivalent higher education institutions.

These details are given for information only and you must not attempt to contact the external examiner directly.

MSc in Actuarial Science:
Professor Andreas Kyprianou
Department of Mathematical Sciences
The University of Bath

MSc’s in Applied Mathematics:
Dr Alison Ramage
Department of Mathematics and Statistics
University of Strathclyde

MSc in Mathematical Finance:
TBC

MSc in Pure Mathematics and Mathematical Logic:

Mathematical Logic:
Prof Mirna Dzamonja
School of Mathematics
University of East Anglia

Pure Mathematics:
Dr Alex Clark
Department of Mathematics
University of Leicester

MSc’s in Statistics:
Professor Richard Chandler
Department of Statistical Science
University College London