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CHAPTER
ONE

ABOUT

This is the Handbook for Post Graduate Research in the School of Computer Science at the University of Manchester. You are expected to make yourself familiar with the contents of this Handbook as it contains information about PGR programmes, assessment rules, and descriptions of the facilities of the School and University, as well as guidance on undertaking PGR studies here.

Our programmes are regulated by the Manchester Doctoral College\(^2\), as are all other Doctoral level training programmes at the University, for which there are a set of rules and regulations as detailed in the Code of Practice\(^3\). This handbook is a description of how we - here in Computer Science - operationalise these rules.

This handbook is an evolving document that continues to grow in line with developments in graduate education and with the ever increasing levels of best practice in postgraduate research at the University of Manchester. Staff and students are encouraged to become actively involved in improving and extending the code. All feedback is welcome and should be directed to the Director of Postgraduate Research here in Computer Science.

You are currently reading Release: 18.0.0 / Version: gd1fc7ed / Including 2 updates since this release / Dated Oct 30, 2018.

Although the information contained in this handbook is believed to be correct at the time of going to press, the School reserves the right to make appropriate changes without prior notice; however the School will endeavour to inform students of any substantial changes made affecting the programmes. This disclaimer does not affect any statutory rights which you may have under English law. Please email any errors or suggestions to the Simon Harper (PGRD)\(^1\) with “PGR Handbook Corrections” in the subject.

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\(^2\) http://www.manchester.ac.uk/study/postgraduate-research/why-manchester/doctoral-college/
\(^3\) http://www.staffnet.manchester.ac.uk/services/rbess/graduate/code/
\(^1\) mailto:simon.harper@manchester.ac.uk
Welcome to Manchester\(^1\) and to our doctoral programmes in Computer Science\(^2\). We are very excited to have you working on our programmes.

## 2.1 Welcome to Students

Welcome, too, to the start of your research careers. You are enrolled on this doctorate to learn how to do research. During the next years you will be learning the skills of a researcher: how to address a problem and understand its context and importance, how to carry out effective investigations using the techniques of particular research fields, and how to evaluate and communicate research. You will be working under the direction of one or more academic supervisors (typically two) and will have the opportunity to work with other staff, colleagues and students. We hope by the latter half of the programme you will be communicating or collaborating with researchers world-wide in your chosen research area by attending conferences and meeting them face-to-face. We expect you will soon be contributing to the wider research community, by writing papers, making presentations at scientific conferences, and helping to shape the future of computer science. We hope your time here is challenging, fulfilling and enjoyable.

I hope together we will make your time here - as an early career researcher - a great experience. I wish you the very best success as a postgraduate research student.

## 2.2 Welcome to Staff

Welcome to you as a member of staff who will be supervising, co-supervising, or supporting the students in their day to day work in the laboratories. As you know, doctoral training and work is the first step towards research careers; and is likewise important for your research endeavours. Our relationship with our trainees is reciprocal: we provide the best Research Environment\(^3\) for our doctoral candidates and help them to understand their chosen research fields. By doing this well, we are also able to encourage them to write 4* papers and facilitate joint impact in high-quality research outcomes.

**Dr Simon Harper, PGR Director,**

School of Computer Science.

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\(^1\) http://www.manchester.ac.uk

\(^2\) http://www.cs.manchester.ac.uk

\(^3\) http://www.staffnet.manchester.ac.uk/services/rbess/graduate/code/researchenvironment/
TL;DR

PGR follows a Flexible Working model with

Core Hours between 10:00 - 16:00

(you are expected to be here between these times unless personal circumstances dictate otherwise)

Useful Information and Contacts

Student Support Office (SSO)

- LF21 Kilburn Building
- T: 0161 306 8155 (internal extension 68155)
- E: Student Support

School Health and Safety Advisor

- LF23 Kilburn Building
- T: 0161 275 6118 (internal extension 56118)
- E: Tony McDonald

PGR Director

- 2.60 Kilburn Building
- T: 0161 275 0599 (internal extension 50599)
- E: Simon Harper (PGRD)

CDT Manager

- G16 Kilburn Building
- T: 0161 275 6253
- E: Dr Jon Shapiro (CDT Manager)

EngD Manager

- IT4.11 Information Technology Building
- T: 07818874885

1 mailto:compsci-sso@listserv.manchester.ac.uk
2 mailto:tony.mcdonald@manchester.ac.uk
3 mailto:simon.harper@manchester.ac.uk
4 mailto:jonathan.l.shapiro@manchester.ac.uk
5
Emergencies

In the event of any emergency, contact the emergency services by calling 9999 internal or 999 external line. The University Security Office must also be informed once the emergency services have been alerted by calling 69966 internal or 0161 306 9966 external line. This number can be found on the reverse side of your University Staff/Student card. The School Health and Safety Advisor must be notified of any emergency (contact above).

Fire Evacuation Procedure

On hearing the fire alarm, evacuate the building immediately by the nearest available exit.

- Do not use lifts
- Do not return to offices to collect belongings
- Go to Building Assembly Point

Fire Detection

If you discover a fire and the building alarm is not sounding, activate the nearest break glass point on your escape route and evacuate the building immediately. Make your way to the building assembly point and await further instruction. If possible you should inform security of the event and supply them with as much information as possible in order for them to evaluate the risk and to take appropriate action.

Fire Alarm

The audible alarm for Kilburn building is a two stage system:

Stage 1 An intermittent alarm - be prepared to evacuate the building.

Stage 2 A continuous alarm – evacuate the building immediately.

The audible alarm for IT building is a single system. Upon hearing the fire alarm it is necessary to evacuate the building.

First Aid

Details of first aiders are available on first aid notices which can be found next to each fire notice, on notice boards and near to every exit point of the building. If local first aiders are not available, Security can be contacted to provide first aid by calling 69966 internal or 0161 306 9966 external line.

Important Notes to Students

Chapter 3. TL;DR
• You are responsible for driving your own Research, not your supervisor.

• General CS PGR information⁹ can be found on studentnet.

• Your PGR Handbook can be found at: http://studentnet.cs.manchester.ac.uk/pgr/handbook/

• eProg is the central system which monitors your progress. You must keep it up to date and you must prompt your supervisor to complete the forms. eProg can be found at: https://app.manchester.ac.uk/eprog/. You are responsible for familiarising yourself with the progression criteria for your programme and for ensuring that deadlines are met.

• University PGR Regulations and Policies, including PGR Degree Regulations, Examination of Doctoral Degrees, Circumstances leading to Change and Presentation of Thesis, can be found at: http://www.regulations.manchester.ac.uk/postgraduate-research-students/

• The Faculty of Science and Engineering provide lots of study support for Research Students, information can be found at: http://www.researchsupport.eps.manchester.ac.uk/

• Your core hours are 10:00-16:00. We expect you to be at the University between the times unless you have other commitments.

• If you need help, advice or guidance on anything - ask!

PGR Home

The PGR Home is in LF15 Kilburn Building. The majority of students will spend their first semester on the programme here before moving to an office in their second semester.

PGR Staff Student Consultative Committee (SSCC)

The School holds quarterly PGR SSCC meetings at which PGR Representatives raise issues for concern to the Committee. If you would like to raise something to be reported or are interested in becoming a PGR Mentor, you should email CS-Mentors@listserv.manchester.ac.uk

Out of Hours Access to the Kilburn Building

Entry to the Kilburn Building outside of normal hours (before 08.00 and after 18.00 Monday to Friday, plus all day at weekends and bank holidays) requires an out of hours pass. The Student Support Office can provide information on how to obtain a pass.

Further Useful Contacts and Links

Information about the University’s Students’ Union and the services and activities they provide can be found here: https://manchesterstudentsunion.com/

General University Student Support including information on accessing academic, financial and personal wellbeing support and advice can be found here: http://www.studentsupport.manchester.ac.uk

The University’s Student Support and Advice team, based in the Atrium of University Place, can offer advice on issues affecting your student life, and can signpost to more specialist services. Email studentsupport@manchester.ac.uk

The My Manchester Crucial Guide is the essential stop for information and advice on everything to do with being a student at Manchester and can be found at: http://www.studentnet.manchester.ac.uk/crucial-guide/

Bullying & Harassment: All students can report something anonymously or get support from an advisor, further information can be found at: https://www.reportandsupport.manchester.ac.uk/

The University of Manchester Counselling Service offers confidential help with any personal issues affecting work, self-esteem, relationships, sexuality, mental health and general well-being. Further information can be found at: http://www.studentnet.manchester.ac.uk/counselling/

Nightline is a confidential listening and information service run by students for students. It is open 8pm till 8am every night during term time. The phone number can be found on the reverse of your student ID card. Nightline can also be

⁹ http://studentnet.cs.manchester.ac.uk/pgr/
contacted at nightmail@nightline.manchester.ac.uk (Expect a reply within 48 hours) and further information can be found at http://manchester.nightline.ac.uk/

The Samaritans are available 24 hours a day, seven days a week, to talk confidentially about any problem, however big or small: www.samaritans.org

The University’s Disability Advisory and Support Service (DASS) provide confidential help and support for staff and students with conditions, whether emotional or physical, that may have a significant, adverse and long-term effect on your ability to carry out normal day-to-day activities. Further information can be found at: http://www.dso.manchester.ac.uk/

The University’s International Student Support team can provide advice and help to answer queries relating to visas and immigration: http://www.studentsupport.manchester.ac.uk/immigration-and-visas/

If you’re not sure about where to find the help you feel you need, just email compsci-sso@listserv.manchester.ac.uk, or call in to Kilburn Building, LF21 to speak to someone.

Instructions for using the Desktop PCs in the PGR Home

1. The desktop PCs are installed with Centos 7 only and will accept your University username and password for logging in. They have pre-installed, what is considered a base set of applications as well as a home file store provided by servers from within the School.

2. When you have settled at a desk and taken “ownership” of one of these desktops you will need to email the hostname of your PC to mike.keeley@manchester.ac.uk. He will then add you to the sudoers file on your PC. To find the hostname if it is not printed on a sticker, type in the command ‘hostname’ in a terminal window. Access to sudoers will allow you to install software of your choice for your work by using the sudo command.

3. When you have finished your time in the PGR lab the machines will be wiped clean and re-installed for the next student. SO, please make sure that you do not save anything important on the local hard drive but save your work either in your home directory (which is backed up) or to some kind of external media. When you move to a research group and are given a new PC to work with, you will find that your home files store travels with you.

4. The lab printer is called pgrprrt.cs.man.ac.uk (IP address 10.99.192.163). You should be able to print documents directly to it using lpr and the printing is free!
The School is located in the Kilburn Building, and the IT building behind it (accessed via the internal first floor walkway). Due to the interdisciplinary nature of computer science, several of our staff are located elsewhere, most notably at the Manchester Institute of Biotechnology (MIB). MIB is building number 16 on the University Interactive Map\textsuperscript{14}. Plans of the building are included at the end of this document.

### 4.1 People and Places

**The Student Support Office (SSO):** is located in Room LF21 (Lower First floor), Kilburn Building, email: Student Support\textsuperscript{1}. They provide administrative support for all students, from registration to graduation. They will be very helpful during your time here.

**Supervisors:** You have already been assigned a main supervisor, who is responsible for your research and training. There will usually be one or more co-supervisors; their role in the research should be clarified at an early stage. Students should have regular contact with their supervisor(s), typically in the form of weekly meetings, although different supervisors may have different approaches. **Important point:** The relationship between the student and supervisor is crucial to the success of the doctorate. If anything goes wrong with that, you should get help to get it resolved.

**Cohorts:** When you arrive you’ll be assigned a cohort. You’ll keep this cohort for your entire time here in Manchester. And have regular meetings with your Cohort Advisor. The cohort is there provide peer support to each other, to maintain a group dynamic as you progress in your studies, to get help and advice on technical aspects which you may not be familiar with but others in your cohort are, and for your pastoral care.

**Advisor:** Each student (and cohort) will be assigned an advisor. The advisor is not an expert on your research. Their role is largely to be an independent person to turn to when you are having difficulties you don’t want to discuss with your supervisor. They can also provide general advice.

**PGR Tutor:** Alvaro Fernandes is our PGR tutor. He is another person you can turn to for help and advice.

**Mentors:** We have a team of peer mentors. They are PhD students like you that, having progressed beyond the first year, volunteer to be available to you in order to share with you their experience of what it felt like to be through the stages you will be going through. They are there as another point of help for you. They will promote social activities and, most important of all, only they can give you a feel for how it feels like, as a student, to be going through the several stages in your programme.

\textsuperscript{14} http://www.manchester.ac.uk/discover/maps/interactive-map/
\textsuperscript{1} mailto:compsci-sso@listserv.manchester.ac.uk
4.2 Accounts & Passes

Identity Cards: All students will be issued with a photographic University identity card (swipe card/student card). You should have this card on you at all times whilst on University premises. It is used to access various restricted areas, as well as acting as your library entry/borrowing card for the central university library. On the back of this card is the number for campus security.

Out of hours passes: Entry to the Kilburn Building outside of normal hours (before 08.00 and after 18.00 Monday to Friday, plus all day at weekends and bank holidays) requires an out of hours pass which can be obtained from the Student Support Office. You will need to bring your University ID card and a printout of the confirmation email indicating that you have passed the on-line Out of Hours Health and Safety test required by the School, a University one, and a School one. To take the Health and Safety course, go to myManchester and log in using your University credentials. Find Blackboard and log into that. Click on the “Health and Safety Course and Out-of-Hours Pass Information” folder. Complete the test called “Part 1: University of Manchester Health & Safety” and the test called “Part 2: Health & Safety within the School of Computer Science”. WHEN YOU HAVE PASSED BOTH TESTS and have confirmed that you have completed them, the “Out of Hours Access” folder will appear. Click on the “Out of Hours Access” folder, read through the guidance document, and complete the “Out-Of-Hours-Pass Test”: you need to score 100% to successfully complete it. When you have scored 100% on the Out-of-Hours Pass Test, a link called “Out-of-Hours Completion Confirmation” will appear. Click on this “Out-of-Hours Completion Confirmation” link, and a confirmation screen will appear. Take this confirmation screen (either print it out, or show it on an electronic device) and your University of Manchester student ID card to SSO (room LF21) who will issue an Out-of-Hours Pass for the Kilburn Building. You will then receive a confirmation email which shows the times during which you are allowed out-of-hours access to the Kilburn Building. Passes can ONLY be issued from SSO between 10.00am and 4.00pm Monday – Friday. Out-of-Hours access is only available with a valid University of Manchester ID card during the times listed in the confirmation email which you receive when your Pass has been issued. Read the document and then take the test. You can take the test as many times as you need to, until you get all questions correct.

Computer Accounts: You will need to set up a University account. A central username and password allows you to access various university-wide systems, as well as giving you access (via the Central Authentication System (CAS)) to online journal content to which the University Library has a subscription. It also serves as your username and password for your teaching domain account. You can sign-up for your account by visiting: Computer Accounts. You will need your personal details and University ID number (the number on your swipe card) to sign-up.

Warning: There is a delay of one working day before you can use your ID card for swipe access to the Kilburn Building outside normal hours; however, during this period you can still gain out-of-hours access by showing your ID card to a staff member on duty at the Kilburn Building side entrance.

4.3 Communications

Email: You will have a a University email account usually of the form: <user>@postgrad.manchester.ac.uk - detailed instructions on how to send and receive emails, both locally and remotely, for both Linux based and windows based systems, are to be found on the Wiki at the StudentFAQ/IT pages mentioned above, as well as this University site: Student email. *Read your email frequently!* There may be important messages from the staff or from the School or University. There may even be offers of free pizza. If you use other (external) email accounts (e.g. gmail or hotmail), you may wish to set up a forwarding to automatically forward mail from your School mail account to your external account. If your School account becomes over quota, then mail will not...
be received and you may miss important messages. Always ensure that you clean up your account regularly, deleting large files and junk (especially in your email box and web browser caches). Or periodically archive your mailbox.

**Internal Telephone System:** External phone numbers for the University are usually of the form 0161-275****. From an internal phone, you just have to dial the extension number, which is 5 followed by the last four digits of the external phone number. Some internal phones also allow you to make external calls, you dial 9 to get an external line, followed by the usual external phone number.

**Emergency Phone Numbers:** In the event of any emergency, medical or otherwise, please contact the emergency services by calling 9999 internal or 999 external line. The University Security Office must also be informed once the emergency services have been alerted by calling 69966 internal or 0161 306 9966 external line. This number is on the back of your University Identity Card.

### 4.4 Resources & Facilities

**Programme Handbook (this document) CS PGR Handbook**:

This describes what is expected of you as a doctoral student in the School of Computer Science, and should also serve as a useful reference. You are expected to consult it. Further information can be found on the School of Computer Science PGR web-site [CS PGR Information](http://studentnet.cs.manchester.ac.uk/pgr/handbook). This handbook also contains some other information that is hopefully useful to doctoral candidates especially when they are new to the University of Manchester.

**Research Student’s Charter:** The aim of this document is to outline and make explicit the rights of research students in the School of Computer Science at the University of Manchester. It can be found at the [Student Charter](http://studentnet.cs.manchester.ac.uk/pgr/charter.php).

**Important Dates:** Induction Week (Week 0) A number of induction events and social events run during this week.

**Do take part!** You will have opportunities to learn what is expected of you, as meet and make friends with staff and other doctoral students, and familiarise yourself with the layout of the School and of the University. Within Computer Science, undergraduate and MSc teaching occurs in 12-week semesters, although MSc teaching occurs in 6-week blocks which divide the semesters. You will have the opportunity to get involved in many activities of the School including UG or PGT laboratory teaching by becoming a Teaching Assistant. More at [Important Dates](http://www.manchester.ac.uk/discover/key-dates/).

**Computing Facilities:** Each doctoral candidate will be given a desk and a computer in the PGR Home and then in the appropriate research group lab. Most machines are set up to run Linux and MS Windows. Depending on the conventions of your research group, you may need to be familiar with either. There is an introductory Linux lab for those who need to familiarise themselves with our local setup during welcome week.

**Computer Science Information Systems (CSIS):** The University has an IT services section. The group who work within our School are called CSIS. They are very helpful. However, if there is some fault with your equipment or with your CS account, you should “raise a ticket” with the IT service desk. Follow the link on the [IT Services](http://www.itservices.manchester.ac.uk) page. Other useful places to get information are are on the [CS Student Intranet](http://studentnet.cs.manchester.ac.uk).

**Intranet:** There is a School Intranet which is divided in sections for students ([CS Student Intranet](http://studentnet.cs.manchester.ac.uk)) and for staff ([CS Staff Intranet](http://staffnet.cs.manchester.ac.uk)).

**eProg:** The University has developed an online system for post-graduate research students which is called eProg. This enables students to plan and track their progression, and provides online listing of various skills training courses. You will need to use eProg as part of your assessment.

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3. http://studentnet.cs.manchester.ac.uk/pgr/
10. http://www.itservices.manchester.ac.uk
11. http://studentnet.cs.manchester.ac.uk
**Student Societies:** The University of Manchester Students’ Union (UMSU\textsuperscript{13}) is an organisation, independent of the University, to which all students automatically belong. As well as the facilities within the Student Union building itself, UMSU also supports an enormous range of student societies, where you can meet students with similar interests.

**International Students & English Language Courses:** If English is not your first language, you may need to further develop your skills throughout the course of the programme. Further English language courses are available during the course of the PhD programme, to enable students to fulfil their full potential as they progress with their study and research. Further information about these courses will be provided at registration. International students may also find it useful to participate in activities arranged by the International Society which has more than 6000 members representing more than 120 nationalities. The university’s International Advice Team offers help and advice to international students on a wide range of issues.

### 4.5 Help and Advice

Starting a new course - and settling in - can be daunting for anyone. In many cases, students will have moved from a familiar university and course, where they were seen as an experienced and knowledgeable student, someone who others came to for advice. Compared to this, being a new student, at an unfamiliar university, in what may also be an unfamiliar city or country, can be a big change that isn’t always that easy to deal with. If you do experience difficulties, remember that even if all the other students in your cohort seem to be having a wonderful time, with no problems at all with the course or anything else, things aren’t always exactly as they may seem, and many other people may be having similar problems to yourself!

It is important that if you are experiencing any difficulties, whether they be academic, personal, or university related, that you seek advice at the earliest opportunity. Any matter whatever that affects your work and progress can and should be brought to the attention of the Simon Harper (PGRD)\textsuperscript{2} or other suitable member of staff, or to the Student Support\textsuperscript{1} Office. We are all here to help you succeed.

In general, if your difficulties involve carrying out your research you need to make this clear to your supervisors, who are here to help you and train you on how to be a researcher. Other members of your research group can also be very helpful. Issues concerning resources required to do your research also must be resolved with your supervisors, who are authorised to decide what resources are appropriate.

If you are having difficulties communicating with your supervisors, or are having other problems with your relationship with your supervisors, you should discuss this with your advisor, or Simon Harper (PGRD)\textsuperscript{2}. The mentors may also be able to offer advice. Any information will be treated as strictly confidential if you request it.

If you need help with an administrative issue, such as registration, payment of funds, or form filling, Student Support\textsuperscript{1} should be your first port of call.

Members of university staff (whether administrative or academic) have a wealth of experience in dealing with the issues that effect students, and if they can’t help you themselves, can often assist you in finding the help you need. Academic staff will be able to advise on management of work, and in many cases, any problems or disruptions you may have had can be taken into account when it comes to assessment of your work and progress.

The Faculty of Science and Engineering also supports your study and runs short courses, events, provides advice, and links to the Faculty and University policies relevant to doctoral students.

\textsuperscript{13} http://manchesterstudentunion.com
\textsuperscript{2}mailto:simon.harper@manchester.ac.uk
As with most worthwhile endeavors, success in graduate study cannot be guaranteed and often depends on the mutual efforts of faculty and student to work diligently and form a productive professional relationship. PGR students are responsible for working towards completion of their degree programs in a timely manner. In addition to gaining expertise in a particular field of study, PGR students are expected to expand the knowledge of that disciplinary field by discovering and pursuing a unique topic of scholarly research, resulting in the PGR Thesis. It is the student’s responsibility to ensure continued progress of his or her academic program and thesis research. Students have a responsibility for the following aspects of their program.

Your Doctorate will be unlike many of your previous academic experiences. It is academically challenging, occasionally isolating and requires a lot of self-motivation, but for the right candidate it can be a phenomenally rewarding experience. A Doctoral qualification is predominantly research-based and students will be responsible for their own learning and development. Knowledge is less acquired from classroom based teaching and more from critical reading and experimentation. In terms of course structure, a Doctorate will be significantly different from your Bachelor’s or Master’s Degree. It will take from 3-4 years and will culminate in a thesis which outlines what you have learnt from your specific research area. Your thesis will be a document containing approximately 80,000 words (although this will depend on your area) and it will be broken down into chapters. Ideally students should have some of their research published throughout their course of study. Each student will be given a supervisor who will monitor their progress and (occasionally) give feedback on the research.

Your supervisor will be there to guide and support you as well as provide you with a sense of direction throughout your work. What they are not expected to do is spoon-feed you information. A supervisor’s feedback on your thesis will often be critical, and come the submission period, your supervisor should play a key role in helping you present your research in an original manner. Given that there isn’t much contact time in terms of lectures and seminars, it is important that your supervisor remain in regular contact with you, and you should arrange meetings as often as possible to discuss your project. Normally the relationship between student and supervisor is a smooth process, but occasionally problems may arise. If this is the case, you should mention it to your Cohort Advisor.

Your supervisor will expect you to work hard and be enthusiastic about your research and thesis. They will be very busy people, with work of their own to do, so it is important that you respect their time and contribution to your project. If you arrange a meeting then make sure you turn up, and if you’ve a deadline looming then ensure that your work is submitted on time.

5.1 Illness

If you are ill don’t come to work at all, but, let all concerned parties know the situation, it is really that simple. However, in some cases your presence is important, in cases where you are speaking, attending a conference or giving a conference presentation, and in cases where your lack of attendance may reflect badly on your supervisory team or the University in general, then you should attend if at all possible. My rule-of-thumb is to answer the following question:
“Would I attend if this was an interview at [Google | insert company you really like] and this was the only opportunity for an interview that would be available.”

If the answer is yes, then you should attend; if the answer is no, then you should make your apologies (preferably by telephone and followed up by email) as soon as you know that you are not attending.

5.2 Responsibilities

Students should note that they are responsible for their work and that the role of the supervisor is to provide guidance and advice. But, be open with your supervisor, if you experience difficulties either in your personal life or with your work then mention it to your supervisor as early as you can - your supervisor will want to support you, and the earlier they know the more options there are.

The responsibilities of the student normally include:

- Arranging meetings with his/her supervisor(s) (taking account of any periods of holiday or work-related absence during the supervision period).
- Keeping appointments with his/her supervisor(s), or informing his/her supervisor(s) where this is not possible.
- Discussing any plans for vacations before commitments are made, to ensure that these are realistic in the light of deadlines and grade aspirations.
- Maintain timely updates on Eprog.
- Learn and improve his/her skills in scientific writing - including writing tools, grammar checking tools, and tools for organizing their literature review.
- Discussing with his/her supervisor(s) the type of guidance and comments s/he finds most helpful.
- Be proactive and ask questions
- Maintaining a professional attitude to his/her work and to the supervision process at all times.
- Maintaining a suitable record of supervision meetings, including dates, action agreed and deadlines set.
- Preparing adequately for meetings with his/her supervisor(s).
- Attending and participating fully in any courses related to the dissertation element of the course provided by the School.
- Developing self-assessment for timely feedback.
- Discussing issues arising from feedback and taking appropriate action.
- Maintaining the progress of the work as agreed with his/her supervisor(s).
- Raising problems or difficulties with his/her supervisor(s).
- Making his/her supervisor(s) aware of any circumstances likely to affect his/her work.
- Giving his/her supervisor(s) due warning and adequate time for reading any drafts. It is the student’s responsibility to make sure that they understand the supervisor’s advice and the feedback on early drafts, and to generalise from specific pieces of advice and feedback.
- Being familiar with University / Faculty / School regulations and policies that affect him/her.

5.3 Expectations

In the first 2-3 months, your supervisor will be guiding you, but by the end of your first year you should be to think independently about the direction of your project. You should:
• Be conducting experiments unsupervised (physical, numerical or literature based)
• Begin to design your own studies, with general guidance from your supervisor.
• Be able to analyse and discuss your data critically.
• Be asking questions at lab or research group meetings.
• Be coming up with your own solutions to problems and your own ideas!
• Where appropriate, contribute to lab meetings, to other projects in the lab, and will probably supervise an undergraduate or a new post-grad.
• Have learned to criticise constructively both your own work and that of others, and discuss research ideas (in lab meetings, conferences, with colleagues in the pub!).
• Be able to describe your research aims to colleagues.
• Be organising your own meetings with your supervisors.

Strong time management is one of the most important parts of PGR study. You should treat your Doctorate as a full-time job, while appreciating that a complete lack of leisure time can be damaging to your health and chances of success. The Research School, here in Computer Science, follows a Flexible Working model with

Core Hours between 10:00 - 16:00 (you are expect to be here between these times unless personal circumstances dictate otherwise)

Similarly, it’s important to recognise when additional duties such as teaching undergraduates or becoming a student representative are taking up too much of your time; if the quality of your PhD is suffering, it’s okay to reject the opportunity to do new things.

5.4 Writing-Up

Your time management is particularly important when writing your thesis. By the time you get to this task you’ll be responsible for:

• Submitting the thesis title and ethical approval form (if appropriate) to the relevant office by the due date specified.
• Ensuring that the final thesis is written in accordance with requirements relating to the correct use of English language and presentation of tables, references, figures etc.
• Checking the completeness and accuracy of the text of the thesis / project submitted.
• Ensuring that submitted work is their own (i.e. avoiding plagiarism and other disciplinary offences).
• Ensuring adequate time for the binding of the thesis.
• Submitting the thesis to the appropriate office by the submission date specified.

5.5 Finally...

Finally, research runs on acts of volunteerism. From reviewing papers to helping at conferences, from organising School socials to giving a group presentation there are many reasons for volunteering within your academic community and the Research School. Helping out (this includes watering the plants in PGR Home) is an excellent way of gaining or developing new skills, knowledge, and experiences. It’s also a good way of meeting new people, both within your own research domain and those people who work in slightly less direct areas to the ones that you are interested in. By getting to know your community and Research School, opportunities for collaborations or new research may present themselves.
EXPECTATIONS OF THE SUPERVISOR

All PGR projects should have a main supervisor and one or more co-supervisors. The co-supervisors should be meaningfully involved in the supervision of the student, albeit not necessarily attending every meeting and at a level reflected in the credit split.

The main supervisor should schedule regular meetings with the student, normally weekly but at least fortnightly. These should involve only the supervisor(s) and the student. The students should be expected to bring work and ideas to the meeting, but the supervisor should actively seek evidence of progress and should discuss reasons for lack of progress with the student. Whilst the supervisor should honestly assess progress and should inform the student if progress or work is not satisfactory, the supervisor should also make constructive suggestions to the student for future work.

Group meetings or workshops are an excellent forum for students to learn how to conduct research, and to see a wider view of the subject than their own project, which is an essential component of a research programme, but these cannot replace one to one progress meetings with students.

Students are here to learn, and the main supervisor has the primary responsibility for ensuring that they are educated as well as assessed. In the case of research students they are here to learn how to become independent researchers. Whilst the final evaluation (submission of the student’s thesis and its examination) must determine whether or not the student has attained the level of an independent researcher, the educational process, led by the main supervisor, must constructively guide them to that point throughout the programme.

The supervisor’s behaviour towards the student must at all times remain calm, professional and constructive, in both oral and written communications. Whilst deficiencies in students’ work must be clearly explained to the student, derogatory comments should not be used. Whilst group meetings will inevitably discuss the work that students present, and the analysis and questioning of work that would normally occur in conferences or other research meetings is essential, this should be conducted professionally and in a constructive manner. Deficiencies in progress should be discussed with the student individually and not in front of other students or staff (except co-supervisors).

Students have a right to request and receive regular feedback on written work. Writing is a vital component of research training and the development of academic writing skills must be supported by the supervisor(s).

Students have a right to request a mock viva, and if they wish to do this the supervisor(s) should arrange one.

The thesis is the responsibility of the student, who must decide the final content of the thesis and when the thesis is ready to be submitted. The student must have ultimate responsibility for his/her own research activity, and in relation to the final thesis, the supervisor’s opinion is only advisory and the student has the right to decide when to submit and if to follow the advice of the supervisor. Thus the student takes responsibility for submitting his thesis for examination and for the consequences. The requirement that the student is able to correctly decide what research to present and is able to correctly judge the value of the research presented in the thesis at the time of submission is implicit in the nature of programme, the award of which is a statement that the student has become an independent researcher.

Whilst it is natural that supervisors will wish to support their students, applications for special consideration and progress reports for internal purposes and for external sponsors must always be completed accurately, completely and honestly.
6.1 Research Supervision

Remember that keeping good records (of supervision, meetings, etc) is essential, and key to showing that decisions were reasonable in all the circumstances. There must be evidence that supervision took place.

A thorough induction to set expectations is key, with an appropriate and comparable replacement if the student misses induction for good reason.

It is important to provide clear information about who to contact if they are experiencing issues with their supervisor(s) that cannot be resolved via discussion with the supervisor(s).

Where progress is not satisfactory, this should be made very clear to the student (and recorded).

Clear information about supervisory support during the writing-up period should be provided.

The School expects all supervisors to be familiar with and abide by the University’s Supervision Policy.

6.1.1 On Commencement of Student’s Research

1. Ensure induction is carried out; both mandatory University and local induction
2. Ensure suitable training which may be formal and/or ‘on-the-job’ is provided for all tasks including research group/collaborator-specific training
3. Decide on the amount and level of supervision that will be required until the student can work independently
4. Ensure there is an assessment of risk for the actual work to be undertaken by the student
5. Advance preparation for end of work - share expectations of what will be needed at the end of their research (for example; handover of data, disposal of material)

6.1.2 Throughout the Student’s Project

1. As part of the regular feedback meetings on research output, include safety issues in order to evaluate whether any change in the nature and level of supervision is required
2. Ensure assessment of risks is reviewed in response to planned changes in research scope and training requirements re-evaluated in response.

6.1.3 Towards the end of a research project

1. Set time aside to ensure handover of all relevant information and materials are transferred or disposed of before the student leaves.

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1 http://documents.manchester.ac.uk/display.aspx?DocID=615
The School has a rooms policy which we adhere to and so it might be useful to explain it a little further. Here, we include an abridged version but you can see the complete Rooms Allocation Policy\textsuperscript{1} on the School wiki.

Briefly, it was created so we could use the space more efficiently and so that

## 7.1 In General

Everybody will be assigned office space for the duration of their legitimate stay in the school, subject to the conditions below.

- All RSs who are registered with the School of Computer Science are entitled to office space excluding those on interruptions, research visits, sickness/illness (without interruption) or the like that lasts for greater than 3 months.
- Hot desk space can be assigned for a period of time, or on a daily basis (first come first served).
- Further, space in individual rooms may need to be expanded (for instance by removing extraneous furniture and facilities) to accommodate increased space requirements
- Moreover, space must be utilised for it to be kept; even in individual cases where a researcher does not use the space provided, they may be moved to and the original space redistributed (especially when space is at a premium).

### 7.1.1 Further Details

- Any incoming RA, RS or RV requires an office space request.
- Moving an AC, PS, RA, RS or RV to a different room requires an office space request.
- “Unofficial” allocations do not exist, and these office spaces will be released.
- To better utilise office space, the School reserves the right to move a person’s office space in the case that this has general benefits (of course with due notice and care).
- Once office space is due to be released, it is the occupant’s duty to clear that space (in particular remove private possessions), hand back keys, equipment (and so on).
- The School reserves the right to clear office space it deems to be unassigned, store and ultimately dispose of uncleared materials, including computers and personal items.
- Individual members of the school can request office space. A group can delegate authority for that group’s request to an individual - noting that groups do not own space, though the School will make the best effort to keep cognate groups of people together.

\textsuperscript{1} https://wiki.cs.manchester.ac.uk/staff/index.php/Room_Allocation_Policy
• All relocation requests will be considered, although for many reasons we cannot commit to resolving every suggested change.

• Office ‘spaces’ are different: For example, ACs may have an Office allocation, RAs normally would have a desk, pedestal, side table, and some shelving, RVs and RSs would normally have a desk and a pedestal, TAs would normally not have office ‘space’.

• The individual should keep their allocated space fit for use, sanitary, conforming to Health and Safety guidelines, and in a functional state so as to facilitate work, meetings, and the like.

• Office space should not be used as personal storage space, items in that space should predominantly relate to work although the presence of some personal items are reasonable, and should fit the space allocated (eg for RSs items should fit in the pedestal and on the desk - while still facilitating the use of the desk for work purposes).

• In all cases the appropriate ‘Exit Policy’ (if instigated) should be followed, and at a minimum: all University property returned; personal effects cleared; hazardous materials appropriately disposed; data, software, source code and associated materials transferred to the supervisor; and the keys returned to the RAP/Environment Manager.

### 7.2 Room allocation processes:

#### 7.2.1 Allocation

For TAs:

1. TAs are not normally allocated Office space, although a Hot desk may be allocated for the teaching period if the RAP decides it is needed for the TA to perform their duties (such as marking).

For RSs:

1. An RS spends the first six months of their Ph.D. in the PGR Home.

2. During this time, supervisor or nominee requests an office space from the RAP (only for the Kilburn and IT Buildings). The RAP will welcome suggestions of which space to use and this may be sought from the RDB.

3. New students are not expected to arrive before the start date shown in their formal offer of admission. Students that do arrive early may be allocated a desk in PGR Home, or may use the hot-desking space - in both cases if space is available.

4. Split site students are allocated a hot desk for the period they are on site via the Student Support Office.

5. Students whose Principal Supervisor is not based in the School of Computer Science, or students not registered with the School, will not be automatically allocated a space, but we will make best efforts to accommodate them if there is an academic imperative. Supervisor applies to the Director of PGR Studies (PGRD) (r nominee, who informs the RAP.

For Hot Desks

1. A hot desk may be reserved on a daily first come first served basis.

2. At the end of the hot desk period - be that a semester, period, or day - the hot deskie must clear he desk, anything left after the end of the period will be disposed of to rubbish.

#### 7.2.2 Release

For RSs:
• RSs will normally keep their allocated space until the initial Award letter is issued. However, once the Thesis has been submitted this is at the discretion of the RAP.

• Upon Withdrawal, Reject (Civ), or Award (A); the PGRD (or their nominee) informs the RAP, which updates the RDB accordingly and ensures that keys are returned and the desk is vacated.

• RSs with Revise (B) or Reject (Ci-iii) are not presumed to keep their allocated space and their supervisor must make an application to the PGRD (or their nominee) who informs the RAP. Allocation is at the discretion of the RAP.

• RSs performing ‘wrapping-up’ work and awaiting their award may keep desk space for a maximum of one year (after application to the PGRD - or nominee - by the supervisor) at the discretion of the RAP.

• RSs intending to transition: if international to the Doctoral Extension Scheme, or those who are not international students but are carrying out similar functions to those on the Doctoral Extension Scheme, may apply to the School for RV status and then have space relocated in accordance with RV procedures (after application to the PGRD - or nominee - by the supervisor) at the discretion of the RAP, and once their Award is granted.

• Students who have an absence from study (e.g. an industrial placement, interruption, research visit, sickness/illness or the like) for longer than 3 months will normally be required to surrender their desk at the discretion of the RAP, and be allocated to a new desk on their return.

**Hot desks**

- Hot desks are released after the period of time agreed.

- Daily (first come first served) Hot desks are released at the end of the day.

### 7.2.3 Move

**For ACs, PSS, RAs, RS and RVs:**

- Anybody can request to move their allocated space by emailing their request to the RAP, which will consider it in view of the current and future space situation, feasibility, and reasons given in the request.

- Requests should be made in discussion with a line manager/supervisor.
With respect to attendance, in general, you are required to be *engaged* in the programme. With the exception of the three Scientific Methods courses, and the Research Student Symposium, in which all research students are required to participate, there are no specific hours you need to be in attendance.

### 8.1 Working Hours

I quote here from and advice document for new PhD students written by Dame Professor Nancy Rothwell, who is the President of the University, *Doing a PhD*[^6]

> These are not fixed — some people start early and leave early, some the other way round, some seem to work long hours but take many breaks. The important thing is that you get things done. A PhD is a very demanding workload and you will need to manage your own working hours. You will need to work flexibly around the demands of your experiments and this may involve work in evenings or weekends.

Your supervisors may have particular reasons for you to work at particular times. The students who succeed well tend to be those who work here and interact with members of their research group(s). It is not a good idea to work from home.

Your attendance will be monitored in the following way. Once a month, your main supervisor will be sent a form on your eProg account. This asks two questions: have you been present during the last month, and have you been engaged during the last month. The supervisor can provide free text to support his answers; usually filled in only if the answers to the preceding questions are “No”. If your supervisors know you are away, working in another lab as part of your research for example, this is not a problem. It is indicated in the free text box. However, we expect you and your main supervisor to be seeing each other on a regular basis and certainly more than once per month.

### 8.2 Tier 4 Visa Attendance Monitoring Census

The University operates attendance monitoring Census Points within the academic year in order to confirm the attendance of students holding a Tier 4 Student Visa. This is to ensure the University meets the UKVI statutory requirements as a sponsor of Tier 4 students and its responsibilities in accordance with its Highly Trusted Sponsor status.

If you are a Tier 4 visas holder, you must attend these attendance monitoring census points, in addition to complying with the School’s own programme attendance requirements.

The attendance monitoring census points and further information are accessible via the [Immigration and Visas](http://www.studentsupport.manchester.ac.uk/immigration-and-visas) site.

Please note: registration is your first point to confirm your attendance at the University and you will not be required to attend a further census point in October, if you registered in September.

[^2]: http://www.studentsupport.manchester.ac.uk/immigration-and-visas
You will receive an e-mail from the School to confirm when and where you should attend to have your attendance confirmed. You must check your University e-mail account regularly. Failure to check your e-mail account is not a valid reason to be absent from a census point.

8.2.1 What if a Tier 4 student cannot attend a census point?

If you cannot attend in person due to a valid reason which includes: illness; placement; field studies; research work; or any other reason connected to your course of study, you must email Student Support to inform us of your absence and your inability to attend in person. In the case of illness, you must provide a copy of a medical certificate. If you are in this position you should report in person to the Student Support Office as soon as possible after you return to campus.

Students who are recorded as interrupting their studies are not expected to attend during their period of interruption.

8.2.2 What happens if a student does not attend a census point?

The School must be able to confirm your presence to the UKVI by the end of each census point in the academic year. If you do not attend a census point when required by your School and you do not provide a valid explanation for your absence you will be deemed to be not in attendance.

Those students identified as not in attendance will be reported to the UKVI and the University will cease to sponsor the student’s Tier 4 visa. The Tier 4 visa will then be curtailed and the student must leave the UK within 60 days.

8.2.3 Keeping your ATAS clearance up to date

If you are studying on a course that requires ATAS clearance, you must make sure that your ATAS clearance is up to date by applying for new clearance if your area of research changes at any point after you obtained your ATAS clearance. Apply for your new clearance as soon as you know that your course details have changed. ATAS applications take approximately 20 working days to be processed, but may take longer at peak times including July-September. You do not need to obtain new ATAS clearance if you obtain a new passport, get a part-time job, or if your contact details change. You can perform at ATAS Certificate Check to see if you need a new Academic Technology Approval Scheme (ATAS) certificate.

8.2.4 Further information

If you have any concerns about the attendance monitoring census points, or your Tier 4 visa status, please contact the Student Support Office.

The University has a very comprehensive website which will answer many of your visa queries at Immigration and Visas.

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1 mailto:compsci-sso@listserv.manchester.ac.uk
2 https://www.gov.uk/tier-4-general-visa
3 https://www.gov.uk/guidance/academic-technology-approval-scheme
4 https://www.academic-technology-approval.service.gov.uk/
5 https://www.gov.uk/guidance/academic-technology-approval-scheme
PART-TIME STUDY

It is possible to study for PhD part-time. Normally this means half-time, so a 3-year full-time programme becomes a 6-year half-time PhD. This has to be approved at admissions. A student who wants to study for part-time PhD would normally apply for the part-time programme. However, under some circumstances a full-time PhD can transfer to a part-time course, but this would have to be approved by the supervisor and by the School. Because it is difficult to do timely research over a 6 year period, not all academics are willing to take on a part-time student, or if they are, not for all projects.

The policy governing part-time programmes is the same as the policy governing full-time programmes.

The relevant rules for part-time study extracted from that document are:

• “...the degree shall be continuous and include study time equivalent to a full-time degree but should not exceed twice the full-time study. The students shall be required to attend the University at all appropriate times” (Ordinance A.4.b)

• “Applicants may also be admitted as a part-time student if:” (Regulation 1.e)

  1. “the periods for which they will be free from employment or other commitments will be sufficient for the purposes of the degree;” and

  2. “the subject is suitable for part-time study.”

• “The duration of a part-time degree will be dependent upon the time to be committed by the candidate for study but shall normally be no more than 6 years.” (Regulation 2.b)

• “Part-time students shall submit a progress report on an annual basis, with a major report occurring after the equivalent of one year’s full-time registration.” (Regulation 5.g)

What this means within the School of Computer Science is described here. For a part-time the student the progression procedures as described previously are amended to include the following. Part-time students are required to attend an ‘end of year’ progression interview at the end of each year of their part-time registration. This has the format of the end of year examination described in the previous chapter. The major decisions about progression taken annually by the examiners for full time students will be taken after the equivalent study time, normally two years (e.g. after year 2 and year 4), for part time PhD students. The ‘end of year’ interviews after year 1 and year 3 of part time PhD registration are intended to generate advice about progression, but not enforced mandatory action such as withdrawal.

There is normally no submission pending for part-time students - but it can be granted for up to 1 year part time study.
Within the framework of the University of Manchester’s 2015 Agenda, the ‘split-site’ PhD program extends the scope for research collaborations between the University and other institutions to encompass research degrees. It is intended as a means of enhancing research collaboration between the University of Manchester and other world-class institutions by allowing PhD students to register on a PhD program at the University of Manchester while working mainly at the collaborating institution. The University of Manchester will seek to ensure that the student experience (including provision of facilities and supervision) are as close as possible to those of students who are in full-time attendance. The School of Computer Science has a duty to ensure that all appropriate arrangements, including facilities, study time and supervision are in place before the arrangement is approved.

Split site PhD students may be registered as full or part-time at the University of Manchester. The minimum period of candidature is three years full-time, or six years part-time. Split site PhD students are expected to attend the ‘Introduction to Research — Essentials’ training course and undertake a Development Needs Analysis (DNA) at the University of Manchester. The supervisor must discuss the DNA with the student and make appropriate arrangements for any training needs identified.

The supervisory team will be based at the University of Manchester, with one or more additional named supervisors at the collaborating institution. Consideration must be given to the level of supervisory input from the collaborating institution and this should be clearly defined at the outset. The arrangements for supervisory visits to the collaborating institution and student visits to Manchester must be agreed and recorded as a part of the proposal at the start of the student’s program. There must be regular contact between the student and main supervisor. It is expected that the collaborating institution will provide any additional sources of support to the student if needed. Supervisory requirements and the responsibilities of the supervisory team should comply with Section 1 of the Code of Practice for Supervision of Research Degrees, taking into account any special or alternative arrangements which may needed to be made in the light of any supervision being provided at the partner institution.

It is important that split-site PhD students are aware of their responsibilities and that arrangements are in place at the collaborating institution to enable them to carry out these responsibilities.

Student progress will be monitored by the School using its standard formal ‘end of year’ progression review mechanisms. The School’s arrangements for progress monitoring and formal reviews must be specified at the outset, in writing, and agreed with the collaborating institution and the student. The student must normally come to Manchester for ‘end of year’ reviews by Manchester staff. Informal monitoring and formal progress review meetings are to be carried out regularly, according to a pre-arranged and agreed schedule.

It is expected that the split site student will submit a thesis to the Graduate Education Office in the faculty of Engineering and Physical Science at the University of Manchester and that the ‘viva’ will also take place in Manchester. The student will be required to give notification of intention to submit in the normal way (i.e. no later that two months prior to the date of submission) and within the period of their registration. Examination arrangements and the examination process should be carried out as set out in the Ordinances and Regulations for Degree of Doctor of Philosophy1.

The ‘viva’ examination will normally take place on the University of Manchester premises and the School will ensure that arrangements are communicated well in advance to all concerned including the collaborating institution. In

1 http://documents.manchester.ac.uk/display.aspx?DocID=13074
particular, sufficient time should be allowed to enable the supervisor from the partner institution to make arrangements to attend the viva should this be requested by the student. The cost of any travel for the partner supervisor to attend the viva would need to be provided by the collaborating institution. On successful completion, the research degree will be awarded by the University of Manchester.

In accordance with normal practice, students and supervisors should be aware of the procedures and processes for addressing complaints and appeals. The University of Manchester’s procedures should also be invoked if a complaint or an appeal is made in connection with the student’s period of study at the collaborating institution.
This is a traditional Doctoral programme which has been designed to be completed in three years. The aim of any PGR student on the 3-year programme is to complete the research and the writing up within three years. The planning must take this into account from the outset. The University regulations allow for one additional year beyond the third for completing the thesis, called Submission Pending. However, most funding schemes for 3-year Doctoral programmes will end after three years, and will not fund 3-year Doctoral students during Submission Pending.

**Warning:** It is now policy (since Sept 2012 intake) that students must complete within four years! After four years, the registration will be terminated and no degree will be awarded.

There is every incentive to complete this programme within the allotted three years while the funding lasts. **It is an absolute requirement that you finish within four years.**

Therefore, the great majority time will be devoted to the main task, which is doing research and completing the thesis within three years. However there are other activities that three year PGR students are required to engage in, and yet others that they have the option of engaging in. The courses listed below are designed to help all PGR students in their endeavours. Activities such as laboratory demonstrating, mentoring and public engagement are optional though they encouraged as being conducive to the general experience of being a successful research student and preparing for wider roles when students take up their chosen careers.

### 11.1 The Main Event - Supervised Research

The main part of your time here will be spent learning to be a researcher, by doing research under the guidance of a main supervisor, aided by one or more co-supervisors. You will also be learning the techniques and tools of a particular field. By the time you get to your third year, you should be writing and communicating your ideas, and interacting with a wider research community. You might even know more about your research topic than your supervisor at this point, although you might not be aware of this.

There are a few guiding points which will help you succeed. First, being a Doctoral student is a full-time pursuit. You need to put in the hours. Second, you need to meet with your supervisor(s) regularly. We recommend at least once per fortnight, but weekly is better. Third, it is highly advisable that you work in the School, so that you can interact with the other members of your research group. Don’t just hide yourself in a garret somewhere. Discussion with others is an excellent source of ideas.

At some point, you might find yourself falling into one these traps. You start to feel, “I’m not good enough; I’m not good as these other students”. This is fairly normal; most people go through this at some point. If you start feeling this, talk to your supervisor(s) about it. They might be able to allay your fears.

The second trap is the perfectionist trap. You don’t want to show your work to your supervisor until it is perfect, or you stop seeing your supervisor at all, because you feel there is not enough progress. This is a path to failure. Rule of thumb: when you least want to see your supervisor is when you most need to see your supervisor.
11.2 Research Integrity

The University expects the highest standards of research integrity from its research students. These standards are set out in its Code of Good Research Conduct\(^3\).

All PGR students must complete the University’s Research Integrity\(^4\) on-line training.

Those with concerns regarding Research Misconduct\(^5\) can follow the process for reporting them.

11.3 Research Data Management

Research Data Management is part of good research practice, improving the efficiency of the research process and making your research more reproducible. There is support available across the University to assist you with this:

- **Planning:** Data Management Plans\(^10\) help you plan how you will collect and handle data and are also a requirement of the University for every new research project. You can find the data management planning tool, guidance on writing data management plans and a data management plan review service on the Research Data Management Website\(^11\).
- **Storing:** Research Data Storage\(^12\) is available from Research IT services, providing 8TB of replicated storage per project, free at the point of use for funded projects (excluding commercial funders). NB: currently only staff can apply for storage space so ask your supervisor to apply on your behalf.
- **Sharing:** Where possible the University recommends using discipline-specific data repositories to share data and you can find repositories for your subject via Re3data.org and fairsharing.org. Mendeley Data is the University of Manchester’s recommended general-purpose research data repository for researchers without a discipline-specific repository. Records from Mendeley Data are automatically added to Pure\(^6\) and you can manually add datasets shared elsewhere to your Pure profile.
- **Training:** here are courses on Research Data Management targeted for each faculty available via My Research Essentials\(^9\).
- **Support:** If you have any questions about Research Data Management you can send them to research-data@manchester.ac.uk.

11.4 Mandatory Elements

In this section we list as a collection of things we require you do in order to be considered to be making satisfactory progress as a Doctoral student. Of course, we cannot say that if you do these things, you will get a Doctorate. Ultimately, to achieve a Doctorate, you have to create and carry out a novel piece of research, write it up as a dissertation, and defend that work in front of a panel of examiners.

What is being said here is a list of things which if you don’t do, you won’t get a doctorate (or at least will put your ability to get a doctorate at risk).

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3 https://www.manchester.ac.uk/research/environment/governance/conduct/  
4 http://www.staffnet.manchester.ac.uk/services/rbess/governance/upcoming-events-and-training/  
5 https://www.manchester.ac.uk/researchmisconduct  
10 http://www.library.manchester.ac.uk/using-the-library/staff/research/services/research-data-management/data-management-planning/  
11 http://www.library.manchester.ac.uk/using-the-library/staff/research/services/research-data-management/  
12 http://ri.itservices.manchester.ac.uk/rds/  
6 http://www.staffnet.manchester.ac.uk/pure/  
9 http://www.library.manchester.ac.uk/using-the-library/staff/research/support/my-research-essentials/
11.4.1 Scientific Methods Courses (COMP80131, COMP80122 and COMP80142)

All PGR students are *required* to take this sequence of three ‘Scientific Methods’ courses at the earliest opportunity. These start in semester one, usually the day before the Research Student Symposium. Timetables for these courses can be found [CS PGR information](http://studentnet.cs.manchester.ac.uk/pgr/).

The titles of these three courses are as follows:

- **Scientific Methods 1’ (COMP80131):** Full title: ‘Scientific evaluation, experimental design, and statistical methods’. See your personal timetable for full details.

- **Scientific Methods 2’ (COMP80122):** Full title: ‘Fundamental aspects of research methodology’. See your personal timetable for full details.

- **Scientific Methods 3’ (COMP80142):** Full title: ‘Scientific Writing and Impact Studies’ See your personal timetable for full details.

11.4.2 Introduction to Research — Essentials

This course is put on by the Faculty of Science and Engineering (FSE). You will learn more about this when you attend the FSE Faculty induction. You can also find a schedule for this and other University and FSE Faculty training courses by selecting the “Training Catalogue” from the menu on the left-hand side of eProg.

11.4.3 University and CS Health and Safety Courses

All students are required by the University to pass a Health and Safety on-line course. If you want to be in the Kilburn build out of hours (outside the hours of 6pm to 8am), you will also need to pass the School of Computer Science Health and Safety test. These tests can be found on Blackboard, which can be found at your [MyManchester](http://my.manchester.ac.uk) page. Below are the instructions to take both tests.

1. Log into Blackboard.

2. Look for the “My Communities” block:

3. PGR students: you need to click on the “CS-PGR-Welcome” community space.


5. Complete the test called “Part 1: University of Manchester Health & Safety”: you need to score 100% to successfully complete it.

6. Complete the test called “Part 2: Health & Safety within the School of Computer Science”: you need to score 100% to successfully complete it.

7. When you have scored 100% ON BOTH TESTS the “Out of Hours Access” folder will appear.

8. Click on the “Out of Hours Access” folder.

9. Read through the guidance document, and complete the “Out-Of-Hours-Pass Test”: you need to score 100% to successfully complete it.

10. When you have scored 100% on the Out-of-Hours Pass Test, a link called “Out-of-Hours Completion Confirmation” will appear.

11. Click on this “Out-of-Hours Completion Confirmation” link, and a confirmation page will appear.

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2 [http://studentnet.cs.manchester.ac.uk/pgr/](http://studentnet.cs.manchester.ac.uk/pgr/)

7 [http://my.manchester.ac.uk](http://my.manchester.ac.uk)
12. Take this confirmation page (either print it out, or show it on an electronic device) and your University of Manchester student ID card to SSO (room LF21) who will issue you with an Out-of-Hours Pass for the Kilburn Building.

Out-of-Hours access is only available during the times shown on the back of your Out-of-Hours Pass. You must have both your University of Manchester student ID card and your Out-of-Hours Pass with you to be allowed to work in the Kilburn Building outside normal hours.

11.4.4 Plagiarism Course

All PGR students are required to complete a short course on plagiarism. See the Section on Plagiarism and Academic Malpractice. This test is also found on Blackboard.

11.5 Engagement

Every student is expected to remain “engaged” with the programme. That means, being very committed to the research, maintaining contact with their supervisor, and participating in the mandatory elements of the programme. Each month, your supervisor is asked whether they met with you as expected and whether they judge that you are engaging with the research. More details on this are given in section.

11.6 eProg

*eProg* is the University-wide progression system and skills training catalogue for postgraduate research students. It is used to document your interactions with your supervisors and other members of your support and assessment teams, so its use will be central. It is located at eProg\(^8\).

*You are required to use eProg*. At various points in your programme, you will record your objectives and progress in eProg. For example, quarterly reports on progress are recorded here. When you have successes, such as publishing a paper, attending a conference, participating in a training programme, etc. you should record this on eProg. It is also used by your supervisors to record any issues which they might have, and to record the attendance. Your supervisors and the school will record your progress through eProg, including the yearly review process.

Every student on eProg is on a pathway. Your pathway will be something like

PhD Comp 3YR FT Sept18

which means you are on a 3-year PhD programme in computer science, studying full time, starting in September 2017. If you click on the Pathway menu item, it will show you the milestones for your pathway. If you click on the Progression menu item, it will show a table of links to the forms you need to fill out, as eProg tracks you as you progress. Most forms are filled out by you, following or leading on to discussions with your supervisor(s). However, there are also forms filled out by your end of year assessors, and the attendance monitoring forms are filled out by your supervisor.

There is a facility to add documents and add meetings, and many supervisors will record every meeting in eProg.

As mentioned in Section, you can also access the training catalogue from eProg.

The Graduate and Researcher Development unit runs a number of short courses (one-day, half-day, two-hour) which are relevant to the final stages of the Doctorate, including: “Planning Your Final Year”, “Writing Up Your Thesis”, and “Viva Survivor”.

\(^8\) http://www.eprog.manchester.ac.uk
11.7 Thesis Writing

Be sure to leave enough time in your planning to write the thesis. Most people take between 6 and 8 months, depending on how quickly they write and how much of the writing already exists in papers and reports. Your supervisor can give you advice on how to write the thesis. It’s a good idea to use the LaTeX style file for University of Manchester Thesis format.

11.8 Submission

You must submit your thesis within four years (allowing for any interruptions or extensions that you may have been granted). When you are ready to submit your thesis you need to complete a Notice of Submission Form not less than six weeks before submission. This form is available in eProg in the Examination Summary section. You will also need to read Regulations for the Presentation of Theses and Dissertations. Giving notice of submission triggers the process of appointing the examiners, who are then expecting the thesis to arrive on time.

If a thesis is not submitted before the end of the programme or submission pending period, you will not be able submit your thesis without exceptional circumstances.

You must submit an electronic copy of your thesis no less than 3 days before your final submission deadline. You must submit two hard copies to the Faculty Graduate Office by the deadline. The electronic and hard copies must be identical.

If you wish to submit a thesis more than 3 months before the end of your programme (or 6 months if part time) you will require a permission of your supervisor and the University. If you are granted permission to submit early then you will still be required to pay full fees for the degree period for which you originally registered.

11.9 The Thesis Defence (Viva)

You will need to defend your thesis in an oral examination which is often called a ‘viva’ (for viva voce). You will typically have two examiners comprising either (i) an internal examiner (a member of academic staff from Manchester who has expertise in your research area) and an external examiner (a member of academic staff from another university or another suitably-qualified and research-active expert), or (ii) two external examiners and an internal independent chair. The internal examiner or independent chair will arrange the date and time of your oral examination. There may also be an independent chair when one of the examiners lacks experience in examining doctorates and in other situations.

In the oral examination you will be examined orally on the content of your thesis and its wider context. After the examination the examiners will make a recommendation to the Faculty PGR Degrees Panel on the outcome of the exam. The examiners may communicate what their recommendation is to you, but it should be clear that this is unofficial and the final decision is made by Faculty.

The outcomes are:

A(i): recommend the award and no corrections are necessary.
A(ii): recommend the award subject to minor corrections being completed.
B(i): refer: the thesis is satisfactory in substance but defective in presentation; allow resubmission without the need for a further oral examination.
B(ii): refer: the thesis is satisfactory in substance but defective in presentation; allow resubmission and require a further oral examination.

13 http://studentnet.cs.manchester.ac.uk/resources/latex/MUThesis/
B(iii): refer: the thesis requires further research to be done; allow resubmission and require a further oral examination.

C(i): award MPhil on the basis of the thesis presented.

C(ii): award MPhil on the basis of the thesis presented, subject to minor corrections being completed.

C(iii): reject, but invite the candidate to revise and resubmit the thesis for the degree of MPhil within six months. A candidate will be permitted to resubmit on only one occasion. A fresh examination of the thesis will be required and may include a further oral examination.

C(iv): no award be made to the candidate and no resubmission be permitted.

The most common outcome is A(ii). Normally minor corrections required under A(ii) must be completed within 4 weeks of the result being communicated to you by the Faculty PGR Degrees Panel. Likewise with the outcome C(ii) the minor corrections required for award of MPhil must be completed within 4 weeks.

Students with outcomes B(i)–B(ii) and C(iii) normally have up to six months to resubmit their thesis (in the latter case for MPhil). Students with outcomes B(iii) have one year to resubmit their thesis. A resubmission fee is charged.

11.9.1 Viva Advice

Further advice from Prof Bill Buchanan OBE, PhD, FBCS - Professor at Edinburgh Napier University:

Be ready to defend, up to a point. You are unlikely to ever win with a debate with the External Examiner, as they typically have the experience to know when they are right. The Examiner does want to see you putting up arguments against theirs, and not bend. A strategy is often to debate the case, and try different routes of explanation, but then to take on their advice for any changes that would be required.

Draw it out and keep it simple. Drawing diagrams and abstracting is a great way to explain your ideas, so wherever possible try to draw an abstraction to show a key point. Try not to over complex things, as they examiner is often looking for you to articulate complex ideas in a simple and understandable way.

The simplest things are often the most difficult to explain. Many candidates go into a Viva thinking they will get probed on the complex areas of their work, but end up having to justify an extremely simple concept, that they have taken for granted. An examiner can often spot a weakness in some fundamental areas and probe around that, in order to see how the candidate thinks through a problem. So candidates should also try and be well versed on the fundamentals areas, especially when it involves maths.

Know your examiners. Every examiner is different, and they have their own style. Some go from page to page, others read generally around significant parts of the work. They will generally have expertise in certain areas, so try and understand their motivations in their research, and some of their specialities, as they are likely to draw on these for questions.

Don’t leave it too long for the Viva. The best time for a Viva is straight after you’ve written your thesis, so try and don’t leave it too long for the Viva, as you will forget a few things.

Stay calm and enjoy. It is your opportunity to lock horns with an expert in their field, so enjoy it, as you’ll probably never have the chance to do something like this in your career.

Be humble. A PhD is a long road, and you learn along that road. The end result should setup you up for the even longer road ahead, but you now have all the tools to be ready for a career in research. None of us truly knows the formula for a successful PhD, but the methods applied by examiners and supervisors have stood the test of time, and do actually result in something that can contribute to the body of science.

Remember that you are standing on the shoulders of giants. A key thing is knowing whose shoulders you are standing on, and help the others who could stand on your shoulders.

Enjoy your time! And finally, for a bit of advice, have a look at Ralph Merkle’s time. He invented key exchange while an undergraduate, but his professor rejected his ideas because he didn’t articulate them properly, and Ralph then tried to publish a paper on it, but it was rejected because he had no literature in
the paper. So, try and write well ... and perfect the art of speaking directly to the reader, and also follow the rules of research that have been laid down over the centuries, and you’re halfway there.

Optional Opportunities

11.10 Research Seminars

The School runs a seminar series, which runs typically on Wednesdays at 2pm in Kilburn 1.4, but it does not run every week. Upcoming seminars are announced over the seminar-distribution mailing list. They can also be seen at the School Seminar webpage. All PGR students are strongly encouraged to attend.

During the first semester, Science in Practice (SIP) seminars will take place in Weeks 1.1 to 1.12 (1 hour per week) on Wednesdays, 5pm – 6pm. These will inform PGR students of the variety of research activity within the Research Groups within the School. They will be delivered either by the heads of the research groups themselves, or by suitably-qualified representatives. All research students are cordially invited.

11.11 Other training opportunities

There are a number of short courses which are available to you. The Faculty of Science and Engineering (FSE) and the University run short courses on a number of “transferable skills”, such as “time management”, and skills directly related to your course, such as “academic writing”, “planning the final year”, “viva survivor”. One course is required for all research students, which is “Introduction to Research — Essentials”. You are expected to find the appropriate training to complement your research activity and personal needs.

You can access a catalogue of training courses via eProg (it should appear on the menu list on the left-hand side of the page, when My eProg has been expanded. If you want to see a list of available courses, leave search term blank, but select appropriate training provider. Many of these courses are for staff, but FSE runs courses for its research students.

The Research Computing is a part of the University’s IT Services, which offers computing services to researchers. They offer courses which are sometimes appropriate to research students. Some of these courses may cost the School money, so you will need to get permission before you take them. Talk to your supervisor.

The Manchester Enterprise Centre offers a course in Innovation and the Commercialisation of Research, which may be available to research students. This costs the School money, so, as above, talk with your supervisor.

11.12 Conference, Workshop, Summer School Travel

It is not enough for researchers to do great research; we also must go out into our research communities to communicate it. The School provides a small amount of money for each student, which for a 3-year research student is £3K, for travel and the purchase of a machine. The policy of the School for spending this money is as follows:

**Guideline 1:** The money follows the student to the supervisor

It is up to the supervisor to decide the best use of the money. The student should not feel that they can spend anyway they like. The money is for the supervisor to use to best enhance the research training of the research student.

**Guideline 2:** Every student should be provided with a new machine of the standard school spec or higher

Every student should receive a new machine when they arrive. This should have a specification which is equivalent to or exceeds the School’s standard desktop PC. There is no expectation that this be upgraded in subsequent

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14 [http://www.cs.manchester.ac.uk/our-research/seminars/](http://www.cs.manchester.ac.uk/our-research/seminars/)
years, unless the supervisor deems that necessary. Of course, the supervisor may judge that a particular stu-
dent’s project requires a much higher spec desktop, or other equipment, and may spend more of the budget on that student. We want to avoid students being given three year old machines which happen to be lying around the lab.

If the student is going to use a laptop, consider purchasing a monitor and keyboard to protect them from upper limb disorders, repetitive strain injuries, and so forth. Machine purchases should be discussed with IT services.

**Guideline 3:** Every student should have the opportunity to attend at least one conference or workshop

It is an important part of research training that students get the opportunity to participate in conferences and workshops and network with other researchers in their fields. It is preferred that some of these experiences are outside the UK. Although it is reasonable to wait until the student has a poster or oral presentation accepted, this is not a requirement. The supervisor and student might together decide to send the student to a workshop or summer school in an early stage in the student’s research. The fact that a particular student has not managed to get a conference or workshop paper accepted by the end of the doctorate should not preclude the opportunity to attend one.

### 11.13 Public Engagement and STEM ambassadors

The School is very involved in “public engagement”, which means promoting science and computer science to the general public. Our school is particularly involved in two areas. The first is promoting computing in schools. The second is working with the Museum of Science and Industry (MOSI) to promote science in science fairs and events. MOSI provides training to scientists and science students in public engagement by qualifying them as “STEM ambassadors” (STEM stands for Science, Technology, Engineering, and Mathematics). As a research student, you should take the opportunity to get trained as a STEM ambassador and to participate in public engagement events. The School’s public engagement are run by Dr. Giles Reger\(^1\).

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\(^1\) [mailto:giles.reger@manchester.ac.uk](mailto:giles.reger@manchester.ac.uk)
RESEARCH STUDENT SYMPOSIUM

The School of Computer Science runs a Research Student Symposium (organised by Dr. Giles Reger\textsuperscript{1}) which brings all the PGR students together to present their research and learn about what their fellow students are doing. This is a symposium in which the research students in the School present their research to each other and the wider community. Every doctoral student is required to participate as follows:

**Year 1:** First year doctoral students will be given specific tasks to carry out during the Research Symposium as part of the Scientific Methods 2 Course (COMP80122). These involve attending and evaluating some of the presentations. There will be a meeting to discuss these tasks prior to the Symposium.

**Year 2:** Students in year 2 of the doctoral will make posters describing their research and their results so far, and will participate in a poster session in which they stand in front of their poster and discuss it with interested people. Prizes are given for the best poster.

**Year 3:** Students in year 3 will give a 20 minute talk describing their research and results.

This gives all new Doctoral students opportunities to meet more senior research students and their supervisors, and more senior doctoral students practice at research communications. In addition, it is an important mechanism whereby we advertise the latest research which is going on in the School.

\textsuperscript{1} mailto:giles.reger@manchester.ac.uk
Each year, at the Research Students’ Symposium, prizes are awarded for the outstanding thesis for which a PhD has been awarded and for the outstanding paper by a research student.

### 13.1 Nomination Process

#### 13.1.1 Eligibility Conditions

In all cases, prizes are for research students that are, or were, registered as such at the School of Computer Science, University of Manchester.

For a thesis nomination, the submission date must have fallen with four years of registration and the PhD must have been awarded between January 1st of the preceding calendar year and the deadline for submission (see below).

If the thesis falls within what is commonly understood as computer science, then it must meet all the criteria for entry in the CPHC/BCS Distinguished Dissertations Award (https://www.bcs.org/).

For a paper nomination, the paper must have been either published or accepted for publication in an external scholarly outlet (typically, a conference of a journal) between January 1st of the preceding calendar year and the deadline for submission (see below).

The research student must be the primary and most significant author of the paper (which is typically and implicitly signalled by a placement as first author in the list of authors), otherwise the nomination must also include a covering letter explaining the role of the research student in the production of the paper.

Nominations can only come from the supervisory team and must have the consent, in writing, of the research student.

No more than two nominations for a prize can come from the same research group.

#### 13.1.2 Deadline

The deadline for nominations normally falls in mid-February and is always widely advertised through a call sent by the academic responsible for the Research Student’s Symposium in the Research School team (typically at the start of the year).

Nominations are sent to the academic named for that purpose in the call for nomination and consist of the items described below, separately, for theses and for papers.

#### 13.1.3 Items for Nominating Theses

The nomination of a thesis must include the following items:
1. An electronic copy (in PDF format) of the thesis

2. The author’s written agreement to participate in the School’s competition and, if the panel so decides, the CPHC/BCS Distinguished Dissertations Award as well.

3. A statement as to whether the dissertation is being considered for publication elsewhere.

4. Written justification by one of the examiners - preferably the external - explaining the outstanding nature of the thesis.

5. The names and contact details of at least three suggested reviewers from outside the School who have no had any participation in either the supervision or the examining of the thesis, and who have already explicitly agreed to provide a review upon request by the BCS in the context of the CPHC/BCS Distinguished Dissertations Award.

6. Any other material available as evidence of merit and impact, e.g., (a) papers that are directly related to the results reported in the thesis – with acceptance rate/impact factor, if possible, for, resp., conference and journals, (b) esteem indicators such as invited research seminars/research visits, etc., (c) patents awarded, etc.

Note that it is the supervisory teams’ responsibility (not the panel’s, nor the Research School’s, more broadly) to nominate the winner thesis (and possibly selected others) to the CPHC/BCS Distinguished Dissertations Award, the deadline for which typically falls sometime towards the end of March, possibly up to the end of April.

### 13.1.4 Items for Nominating Papers

The nomination of a paper must include the following items:

1. At least three substantive, anonymous, referee reports (but see below). For a conference paper, the reports needed are those notifying acceptance. For a journal paper, the reports needed are the most substantive ones, from any of the possibly many refereeing rounds. If so wished, all the reports from all rounds can be submitted.

2. The number of papers published in the conference or journal (preferably in the year of publication, or else the historical average).

3. The acceptance rate (resp., impact factor) of the conference (resp., journal) (preferably at the year of publication year, or else the last one available accompanied by the corresponding year of measurement).

Note that if there aren’t as many referee reports as required above or if they’re not substantive or if the data about number of papers accepted and acceptance rate/impact factor are not known, then the Research School considers that there is a lack of a priori evidence for the nomination.

In this case, the supervisory team is welcome to make a case for exemption in writing, especially in cases of journals whose impact factor is not available at all, but also in cases where there are fewer referee reports than required.

In particular, the supervisory team may wish to ask prominent researchers in the same technical area that are from outside the School and have no had any participation in the supervision to write to the panel in support of the paper. In this case, it is the supervisor(s) responsibility to make it evident to the panel how these invited expressions of support complement the referee reports and are also both authoritative and unbiased.

### 13.2 Award Process

#### 13.2.1 The Panel

The nominations are judged by a panel of academics who are members of the Research School team, typically with three members.
13.2.2 The Brief

Because a member of the panel is, more often than not, not an expert in the research areas to which the thesis or paper contributes, the panel does not judge the technical quality of the submissions.

The panel aims to identify an outstanding thesis or paper on the basis of the compelling nature of the evidence amassed from expert in the research areas to which the thesis or paper contributes: this is the role, therefore, of the referee or examiner reports required for a nomination to be valid.

This means that the more compelling the testimonies, as gleaned from the referee or examiner reports accompanying the nomination, the stronger the claim to exceptional achievement.

13.2.3 The Outcomes

The panel aims to award one prize of outstanding thesis, but has, exceptionally, announced joint winners in the past.

For the purposes of a School submission to the CPHC/BCS Distinguished Dissertations Award, the winner is automatically submitted to the external competition and the panel often recommends the submission of other submitted theses when they are judged worthy of representing the School externally.

The panel awards one prize for outstanding paper and names two joint (i.e., non-ranked) runner-up papers.

13.2.4 The Prizes

An award comes with a certificate and a prize sponsored by an external organization (such as, in the past, Oracle, and, more recently, IBM), the origin and value of which are announced in the call for nominations.

The prizes are given to the winners at the annual Research Student’s Symposium.

13.3 An Approximate Timeline

1. beginning of January:
   • call for nominations is sent
   • eligible students discuss potential nominations of eligible papers and theses with supervisory teams
2. from beginning of January to mid-February:
   • students and supervisory teams construct the cases (see, in particular, the list of items above)
3. mid-February:
   • deadline for nominations
4. end of February
   • awards panel meets
5. beginning of March
   • awards announced
   • supervisory team(s) of winner thesis (and possibly selected others) construct the case(s) for nomination to the CPHC/BCS Distinguished Dissertations Award
6. mid-April
   • prizes are given in the annual Research Student’s Symposium
7. between end of March and end of April (depending on an external deadline)
   • supervisory team(s) of winner (and possibly selected others) complete the Web-based process of nominating the thesis(es) to the CPHC/BCS Distinguished Dissertations Award

8. between September and November
   • CPHC/BCS announce their Distinguished Dissertations Award(s)
CHAPTER

FOURTEEN

PROGRESSION AND ASSESSMENT

Each year, there are a set of activities you have to go through to demonstrate that you are making good progress in your research, and have a good plan to complete on time.

There is a less formal review, called the Research Progress Review where your supervisory team and an independent assessor will evaluate your work, and give you feedback and suggestions. They may also give you remedial actions, which you will have to complete before the end of your current year. You may be required to produce a larger piece of work, such as the long report during the first year. This would be assessed by your supervisor and an independent assessor.

Note: It is a requirement that all postgraduate researchers at the University of Manchester create an ORCID (Open Researcher and Contributor ID)\(^2\) and make it known to the University. ORCID is a non-profit organisation supported by a global community of organisations with interest in research. Your ORCID provides a unique research identifier that distinguishes you from every other researcher and links your professional activities. Registration to ORCID is free and will mean that research outputs can be tagged and tracked more easily throughout your career. ORCIDs are now routinely being requested by publishers and funders and it is therefore important that all researchers create an ORCID and make it available to the University. **Registering for an ORCID** is quick and easy and we have set up a dedicated web page to help you to claim your ORCID. You can create your ORCID and connect it to your student record by following a few simple steps. If you have any questions about how to claim your ORCID please contact the Library’s ORCID Support Service.

At the end of years 1 and 2 you have a formal end of year examination in front of a panel consisting of one independent assessors. This end of year assessment will take into account the outcome of the research progress review and updates on your performance from your supervisor(s), the report from the second reader, as well as your performance during the end of year exam. Evidence concerning your level of engagement, such as failure to participate in the required modules, could also be taken into account.

The possible outcomes from the end of year examinations are: proceed into the next year, withdraw from the programme, but with the possibility of submitting for a lesser degree, typically MPhil, or withdraw.

If by the end of year 3 you are not ready to submit your thesis, you may request a change of registration to ‘submission pending’. This is to allow extra time to prepare the thesis up to one year.

**Danger:** The submission of the thesis must take place within 4 years of the start of registration of the PhD.

14.1 Progression Overview

Each research student will go through yearly examinations in order to demonstrate that they are making satisfactory progress towards production of novel research results leading to a Doctorate. In each of these years, the student will produce a Summary report which is a short report summarising the research and whatever progress has been made, and a plan for the subsequent year(s).

At month 9 of year 1 the students will go through an interview called a Research Progress Review with their supervisor and an independent assessor. The purpose of this interview is to provide an initial assessment of the student’s progress, and provide feedback, and if necessary, assigned remedial actions or achievement milestones to help get a faltering student back on track.

At the end of years 1 and 2 there is a so-called End-of-Year (EoY) interview. This should be viewed as an exam, because it makes the formal decision whether the student progresses into the next year. Possible outcomes are: progress into the next year or do not progress. In the case of non-progression, the possibility of submission for a lesser degree may be offered, typically and MPhil.

**Warning:** This describes the procedure for full-time PhD students. The procedure for part-time PhD students is described in the ‘Part-Time’ Chapter.

14.2 1st Year

The student will present the work to an End of Year Examination Panel. They will make the ultimate determination whether the student can progress to the next year, has to withdraw, or has to withdraw but can register for MPhil, using evidence provided by the student’s performance, the supervisor, the independent assessor, and other information available on eProg.

14.2.1 1st year ‘Research Progress Review’:

- [Month 8] Research Progress Report (sometimes called the ‘Short Report’ or ‘Summary Report’)
  1. (prompted by eProg), the supervisor informally recruits the Independent Assessor, who should be a domain expert or in a closely related domain to the student. And is selected by the supervisor in consultation with the student. This assessor will also examine the student’s ‘additional work’ if needed.
  2. The Student submits Research Progress Report (via eProg) comprising a research proposal, a brief summary of the research so far, and a research plan, and also emails to both the Independent Assessor and the Supervisory Team.
  3. This report should be 1500 words excluding references - 500 words to include the social / technical / research impact explicitly (along with the student’s ORCID³). The supervisory team and the assessor will check the format and length and can return this to the student unread if it does not meet specification.

**Note:**

**Research Progress Report:** The Research Progress (Summary or short) Report is primarily a research proposal. It needs to make clear: what is the research problem, why it is important or interesting to address it, what is the approach the student intends explore to try to address it, and how success or failure is going to be evaluated. It

³ [https://orcid.org/](https://orcid.org/)
should also contain a brief summary of progress so far and a plan for how the research is going to be carried out. Sept starters will be taking the scientific writing course (Scientific Methods III, COMP80142) prior to this, and may wish to use this report as assigned writing piece they will need to produce. The report should be 1500 words excluding references (along with the student’s ORCID\(^3\)). *Ultimately, it will need to readable by the end of year examiners, who will not necessarily be experts in your branch of computer science. Thus, it needs to be readable by an well-educated, general computer science audience*.

In addition to the summary, the report should include:

1. Impact of the Research be that social / technical / research impact (500 words to include the explicitly)
2. a research plan for the next year, concerning how the research should be carried out,
3. A plan as to how this will lead to a thesis (e.g. proposed structure of a thesis at the level of chapter and section headings),
4. a list of publications, published or submitted,
5. a plan for other activities, including any visits, internships, targeted conferences or journal publications, and public engagement activities.

**[Month 9] Research Progress Review:**

1. This is organised by the supervisor and could take place in the supervisor’s office or a small meeting room. The review times and locations are set between the interested parties (the independent assessor will inform SSO of the time/date/location). The review gauges the fitness of a student for continued PhD study and assesses progress to date.

2. This event will last about one hour with 15-20 min presentation given by the student, followed by questions and discussions led by the independent assessor. This presentation is pitched to the independent assessor, who, it is assumed, will not know the motivation of the research. This should be viewed as a research talk, and the discussion can be technical in nature. The outcome is documented via eProg and can be 2-fold:

3. Progress is as expected, student is on good path towards PhD: no further action required.

4. Progress is unsatisfactory/questionable: the student will have to submit additional work (via eProg\(^1\)), which is assessed by the independent assessor. This work is by default the Long Report, however, the independent assessor can assign remedial action (any reasonable additional work if it is explicitly documented), such as writing a paper, performing a critical review, etc. The remedial action being stored in the student’s eProg document store, and emailed to the supervisory team and internal assessor 1 month before the progression interview. This is reevaluated by the independent assessor for Progression (Research Progress Update eProg-COMPM2000). This assessment report being available one week preceding the progression interview and sent to SSO (who will pursue reports not returned) for onward distribution to the Progression Examiner.

**Note:** The Long Research Report is a substantial document at the level of an MPhil thesis or a journal paper with no page limit and ample space for literature review and technical details. The latter is particularly appropriate if an alternative format thesis is planned. A typical length would be around 15,000 – 20,000 words.

**Additional Notes and Checklist**

The Research Progress Report (aka the short report) is a key piece of evidence about whether you should progress to the next year. However, you really want the short report to be usefully informative. We see a lot of unhelpful short reports in spite of massive amounts of supervisor effort and the Academic Writing Class. It’s a good idea to keep

\(^1\) [http://www.eprog.manchester.ac.uk](http://www.eprog.manchester.ac.uk)
Remember the audience: It depends on whether you’re doing a 9 month Research Progress Review or an End of Year interview! Consult with your supervisor about the examiner’s background. Don’t hesitate to contact the examiner!

Some problems are big and some small, but you want to minimise them. So here’s a quick checklist.

Checklist

1. [ ] LENGTH: Is/Does your short report
   - [ ] short, that is, 1500±150 words (excluding references).
   - [ ] contain appropriate number of diagrams/charts/images?
   - [ ] contain approximately 500 words explicitly describing the impact (social/technical/research)?

2. [ ] MECHANICS: Did you:
   - [ ] put the title, your name, year (e.g., EOY 1 CDT), and ORCID) on the report?
   - [ ] proofread the report?
   - [ ] check paragraph size/shape? is the purpose of each paragraph clear?
   - [ ] use enough lists/tables/diagrams (but not too many)?

3. PROBLEM SPACE: What is the range of problems we should be thinking about?
   - [ ] What is your area?
   - [ ] What is the subarea?
   - [ ] Roughly what sort of problems are investigated in your subarea?
   - [ ] What sort of methods are standard in this area?

4. PARTICULAR PROBLEM: What is your project?
   - [ ] What’s your goal?
   - [ ] What kind of methods will you use?
   - [ ] What will be different about the world and our knowledge of it after your thesis?
   - [ ] What’s the state of the art (if any)?
   - [ ] What are the parts of your project and how do they form the content of a thesis (see thesis outline)?

5. PROGRESS: How far along are you?
   - [ ] Which parts of your thesis outline can you flesh out?
   - [ ] What took longer or shorter than you anticipated?
   - [ ] What are your publications or other tangible evidence of progress?

6. THESIS OUTLINE: Have one!
   - [ ] Did you focus on the contribution chapters no sub-bullets for intro or conclusion, minimal for background)?
   - [ ] Did you put estimates at least on your private version?
   - [ ] Are you ready to discuss the weight of each point?

7. PLAN: How are you hoping to complete the project?
• [ ] How will the work for each chapter go?
• [ ] Can your refer to your progress to help **ground estimates** of future progress?

8. RISK MANAGEMENT: What do you do if things go wrong?
• [ ] What are **likely risks** to complete?
• [ ] What are some possible **mitigations**?

9. REALITY CHECK:
• [ ] Your supervisor has read the **near final** draft?
• [ ] **Someone else** (other student or member of staff) read the near final draft?

**The Three Questions** Remember, the short report (along with interviews, supervisor meetings, etc.) helps to answer three questions:

1. [ ] Is the proposed project **big enough** for a PhD?
2. [ ] Is the proposed project **small enough** to be completed on time?
3. [ ] Is **this student** going to be able to complete on time?

Every part of your report should help answer one of these questions. If you can’t say **how** each part does, that’s a signal to rethink that part.

14.2.2 End of Year Examination:

An End of Year (EOY) interview is one of several **progress monitoring** mechanisms designed to check whether you are on track to on time submission and successful defense of your dissertation. It is a bit high stakes as it is the canonical point for involuntary leaving the program (i.e., “failing out”). That being said, almost everyone passes their EOY interviews, so the main normal purpose is twofold:

1. force you think hard about your progress and planning
2. get feedback from people uninvolved in your supervision

**The Three Questions** Remember, the interview is the last point to answer three questions:

1. [ ] Is the proposed project **big enough** for a PhD?
2. [ ] Is the proposed project **small enough** to be completed on time?
3. [ ] Is **this student** going to be able to complete on time?

Every part of your presentation should help answer one of these questions. If you can’t say **how** each part does, that’s a signal to rethink that part.

14.2.3 Examiners

Examiners are not required to assess the technical achievements of the students, this is why the supervisors have to be there and are invited to comment at the end. I expect that each examiner will spend 45 minutes preparing for the exam by reading the short report and, comments on remedial action, and the Independant assessors report detailing their happened (or not) with how th estudent has addressed those remedial actions. 45 minutes will be spent on the interview and a further 30 minutes writing the progression report.

The progression interviews/examinations are intended to determine whether the student has suitable plans for their PhD, and you are expected to explain things like: what the problem or research question is; what approach are you planning to use to solve it; how long do you think it might take; what risks are there and what are you doing to mitigate the risks; what publications do you hope to generate as well as a statement of progress; what your thesis plan is (which
bits of work will go where in a thesis); and how far along have you gotten, for which some reporting of results to date is required.

You are expected to explain this in terms that can be understood by any academic from any of the far reaches of the School, and that is a significant part of the challenge for the student (not for the interviewer/examiner - if the interviewer/examiner can’t understand then the failure is the student’s). Part of the benefit for the student is that when confronted with this hard challenge you are forced to pull out of the detail of your work and look at the bigger picture from a distance, and try to explain what you are doing from that perspective.

Doing this sometimes helps you to see problems when you would otherwise remain too deep in detail to think about, or where you have formed the view that your task is to build something really complicated without really thinking about what it is for and who will care when it’s done.

The supervisor should be doing that but even supervisors can sometimes be engrossed in technical challenge.

The interview should force the student to think about significance or purpose, and impact - for a PhD you are required to make a contribution to knowledge and understanding, but not just to do something that hasn’t been done before so you should be able to explain possible impact - do you understand that and have they got a clear picture of what you are trying to bring to the world, who might use it and what use it will be? If you can’t explain that to a third-party in a way that they understand then there is possibly a problem.

The progression interviews were also set up to try to reduce the chances that the student is just pursuing directionless research without clear objectives or is undertaking a sequence of semi-random tasks for the supervisor that won’t lead to a coherent body of work that can be written as a thesis by the end of the programme.

### 14.2.4 Process

- **[Month 11] End-of-year interview** The Short Report (eProg-COMPM1998) - uploaded via eProg, with 15 min presentation, followed by 30 min Q&A – with 1 (or 2) examiners, student, supervisor(s). Organised by the supervisor/examiner, reported in eProg.
  1. If significant additional work has been requested by the Independent Assessor, then two examiners are required;
  2. If no significant additional work has been requested by the Independent Assessor, then one examiner is required;
  3. If the the examiner is new to the duty, then two examiners are required;
  4. Examiners are randomly allocated to a student (and their supervisory team), by Student Support. In this case, it should be assumed that the examiner is not an expert in the particular research field, and the technical level should be pitched accordingly.
  5. The Supervisor and Examiner arrange a time/date/location between themselves and at a minimum the examiner and supervisor are present (optimally the supervisory team is present) to conduct the examination (the Examiner will inform SSO of the time/date/location). SSO will issue prompts if arrangements have not been made, and the student will not progress or be able to register without this interview.
  6. The student will give a 15 minute oral presentation describing the goals of the research, why the research is important, a summary of work complete, work underway, and future direction. This will be followed with questioning by the examiner and supervisory team and include technical question by the supervisory team. The interview is not intended to be a rubber stamp but an in depth presentation, Q&A, and discussion which both assesses the student’s progress and gauges the student’s ability to complete, while also providing the student with a learning experience of answering detailed questions in examination conditions. It should be assumed that the examiner(s) are not experts in the particular research field, and the technical level should be pitched accordingly.
7. The student will leave and the examiner and supervisor, informed by the supervisor and independent assessor reports, will reach a conclusion. If any remedial action was given at the Research Progress Review, the supervisor will inform the panel whether it was satisfactorily completed (and the work stored in eProg may be accessed - Research Progress Update eProg-COMPM2000). The goal of this examination is to ascertain whether the student has made sufficient progress and is on track to succeed at producing a doctorate in time.

8. If they are satisfactory, the student progresses to the 2nd year. If not, the student may be offered the opportunity to complete an MPhil, otherwise if progress is not sufficient for an MPhil then the student is not able to progress. There is no ‘conditional progression’ subject to remedial action at this stage.

Note: What is the Short Report
The Short Report is repurposed from the Research Progress Report with small changes made based on the experiences of the RPR. Notably you will now include an extra section ‘RPR Responses and Comments’ (outside the word count) which lists all of the comments from the RPR and a detailed description of how you address them. Not just changes to the report but in real life - think of responses to a paper review. For example (1) if a comment was that the presentation was poor, you might have made efforts to go on presentation courses, to give presentations to lab members, and to spend more time doing presentations. You’d then detail this in the responses to the RPR. Or (2) if your evaluation plan was not as expected, you might detail changes you have made to make it successful. Remember, the Short Report is how your evidence the thing you have done, it is not the thing itself.

14.3 2nd Year

The student will present the work to an End of Year Examination Panel comprising the supervisory team. They will make the ultimate determination whether the student can progress to the next year, has to withdraw, or has to withdraw but can register for MPhil, using evidence provided by the student’s performance, the supervisor, the independent assessor, and other information available on eProg.

14.3.1 2nd year ‘Progression’:

- [Month 23] All students submit a short report only. via eProg, and repurposing that created in year 1 with updates and changes clearly identified.
  1. Examined via a 20 minute interview by the supervisory team. A decision is generated and recorded in eProg.
  2. If progress is as expected, student is on good path towards a Doctorate: no further action required. If not, the student may be offered the opportunity to complete an MPhil, otherwise if progress is not sufficient for an MPhil then the student is not able to progress. There is no ‘conditional progression’ subject to remedial action at this stage.

14.4 3rd Year

Many students are aiming to finish by the end of year 3 (typically your funding will have run out). In this case, you need to submit a form indicating your intention to submit and nominating your examiners (via eProg). Your main supervisor will select the examiners in consultation with you. See the ‘Submission’ section for more details.

However, some students may not have completed after 3 years because their programme is longer than this, or because they are delayed for some reason. If you are delayed then you should transfer to “Submission Pending”, which is a writing up period.
In order to do this, you need to submit an End of 3rd Year report form, along with a plan for achieving what is necessary within 12 months. This form will need to be signed by the main supervisor and the PGR Director, via eProg.

14.4.1 3rd year ‘Progression’

- [Month 35] All students who have not completed an eProg ‘Notice to Submit’ must submit a Completion Plan, comprising a... and outline a detailed plan for completion (via eProg) and discuss this with the supervisory team (recorded via eProg).

1. At the request of the Supervisor or the PGR Director the student will also have a 1 to 1 interview with the PGR Director (or their nominated representative).

2. For students wishing to transfer to Submission Pending. If the Completion Plan is approved the student can move to submission pending. If the Plan is not approved the student must submit what there is for examination.

3. For all other students. If progress is as expected, student is on good path towards a Doctorate: no further action required. If not, the student may be offered the opportunity to complete an MPhil, otherwise if progress is not sufficient for an MPhil then the student is not able to progress. There is no ‘conditional progression’ subject to remedial action at this stage.

- [Month 42] All students who have not yet completed a ‘Notice to Submit’

1. Must outline a detailed plan for completion (via eProg) and have a 1 to 1 interview with the Director of PGR (or their nominated representative) also recorded via eProg.

14.5 Submission

- [Month 48] The student will submit. The only exception is for an interrupt period or Programme Extension.
A teaching assistant is a postgraduate student who helps with teaching in some way, usually in a lab demonstrating some aspects of what needs to be done, helping the students understand it and perform it, and marking the work. Teaching assistants are either paid to do this, or have to do it to fulfil a requirement of their funding.

The term teaching assistant is the School’s new term for the what we used to call “demonstrators”. So you will still hear the phrase “demonstrator” for a while until people get used to the new term.

In order to become a teaching assistant, you will need to respond to a call for the subjects you know about. This is so we can put the right students in the right labs (there is always a need for TAs to know JAVA). You will also need to take the Graduate Teaching Assistantship course which is put on by the Faculty of Engineering and Physical Sciences.
All students must produce a thesis, which describes in full detail the wider context of the research field including a literature review, the motivation for the research, the research which was carried out, an evaluation of the results, and a discussion of the contribution made to the field by the research and what should be done in the future. This needs to be submitted by three days before the end of the fourth year. For the relevant University policies, see ‘Policies’ Chapter.

There are two formats in which the thesis can be produced: traditional format and alternative format. Traditional format is probably what most people imagine a thesis is like, a very substantial report presented as a self-contained exposition. The alternative format thesis “... allows a postgraduate doctoral or MPhil student to incorporate sections that are in a format suitable for submission for publication in a peer-reviewed journal.” Presentation of Thesis Policy. The alternative format thesis is often thought of as a collection of publications, with a short commentary associated with each one, tying the works into a unifying thread, or “thesis”.

Which you use is a decision you will need to make with your supervisor.

The advantages of the alternative format thesis are that if you already have several papers, you can more easily produce a thesis out of them. Also, if you have plans to write several papers, you can write your thesis in such a way that it will be easier to facilitate these plans, because writing the thesis will be build around writing papers. The papers can be submitted after the thesis.

The disadvantage of the alternative format is that it is less widely used in the UK, so many supervisors and examiners may be less comfortable with it.

A QandA on the Alternative Format Thesis can be found here. Note that it says in Section 4, “...it may not be until year 2 or 3 that you feel you are in a position to use the alternative format.” but it says in Section 5 that a request must be made in writing by the end of year 2. Thus, if you are considering using alternative format, apply for it by the end of year 2. You can revert to traditional format without asking permission formally.

16.1 Plagiarism

All students should make sure they are familiar with what the university expects from its students. All students are also required to complete a plagiarism course.

In view of the serious consequences of plagiarism and academic malpractice, it is essential that all students familiarise themselves with the accepted format for referencing work in their discipline, and that they start using the accepted form as soon as possible.
16.2 Writing Advice

Whichever format you choose, you must give yourself sufficient time to produce the thesis. You must know yourself, and how quickly you are able to write. Six months is a minimum time for most people. Some may need nine.

Do not feel that you need to write it in order; start with the easiest parts first. Usually the technical sections on the research done by you are the easiest, because you know them well. The literature review may be next easiest. The introduction is usually the hardest to write, and many advise that it be written last.

16.2.1 Thesis Writing Advice

Sage advice from Prof Bill Buchanan OBE, PhD, FBCS - Professor at Edinburgh Napier University:

**Say up-front what the problem is, what other people have done, and how you have added to it.**
The Introduction chapter is the most important chapter of all, and you need to grab the reader, and tell them what the problem is, and how you have solved it. If the examiner understands the thesis after the Introduction, you are half way there. I’ve read a few thesis’ where I had no idea what the point was until I actually got to the end, and the contribution was revealed on the last page. This is a major gamble, as some readers may give up before that point, and not know the end contribution. Be fair on the reader and tell them the contribution, and keep telling them.

**Get rid of those typos!** You wouldn’t believe the number of PhD thesis’ I have read that have a typo in the very first line of the thesis. A reader becomes annoyed if they have to keep correcting typos, and the more annoyed the reader, the more time they are taking away from actually reading the content. Try and start off on a good footing, so that the Abstract and Introduction chapter have been read over several times - typically talking them out loud. If possible get someone else to read the Introduction, and see if they understand what the point of work is.

**Bad grammar shows bad practice and a weak supervision.** Part of doing a PhD is learning how to write and present ideas, and how to review and edit. One of the most important things that you learn in a PhD is how to write, so that others can understand your ideas. A good part of this is for supervisors to get involved reading the work, and in giving detailed feedback. It is often a good idea for supervisors to mark up early drafts with red pen, so that students get an idea on the amount of checking and editing that is often required.

**Superlatives are not very good!** A PhD is a scientific study, and the usage of superlatives should be avoided, along with weak words like “big” ... “the measure gives a very big number”. If a number is large, define what large actually means, as everything is relative.

**Significance matters.** I’ve read thesis’ that draw a graph, and then gives me values of 10 decimal places, and then to be told that there is an importance of one thing to another. But is it significant? If I move from 100.01254632 to 100.1263241, is that a massive change and why do we need so many decimal places? Every measurement has an accuracy, and this should always be included in the presentation of the values. Examiners want to know the significance of something, and if it isn’t significant, then just tell them.

**One table tells much more than a whole lot of numbers.** Again I’ve read so many thesis’, where the writer continually presents a whole series of numbers and graphs, and where they could all be moved into an appendix, and compiled into a single table (or graph). A good supervisor should be able to spot how to collapse lots series of tables into a single one, as they often have to do it for papers. Many students rely...
on drawing graphics for presenting trends whereas tables are often better, especially in defining changes within the figures presented. A great tip is to normalise values, and show how the values vary between each other. Relative values are often easier to understand than absolute ones - remember too that most values have units, and that units matter. I’ve quizzed many students on whether they are talking about Mbps or MBps - there’s a difference of eight in there!

**Draw some pictures.** There is no place for trivial graphics and clip art in a PhD thesis, but there is a place for the abstraction of complex ideas, especially in the introduction. There no real need to just copy the graphics from others, as they should come from the ideas inspired by the writer. I’ve read quite a few thesis, where the text just goes on and on. Break the text up every now and then, and give the reader something to ponder over.

**Break up and but keep a narrative.** There’s a careful balance here. If you keep your sections short, it becomes to “bitty”, and if you make them too long, they become long and unwieldy. I personally read whole sections in a single sitting, and try and take in the ideas, and I won’t move on until I understand it. A long section, especially where there are no sub-sections, often introduces too many concepts which can make it difficult to read. I normally recommend a maximum of a page and a half of text before there should be a break (such as a sub-section break). Long paragraphs are not a good thing as it becomes difficult to take in all the concepts introduced. Try, if possible, not to make them too short, but not too long. A paragraph that goes on for half a page is probably too long, and one that has only two sentences is probably too short. Along try and avoid too many sub-sub sections, as it becomes difficult for the reader to put it all into context.

**Avoid using the words of others too much.** A thesis is written by the writer, and it is their words. A long series of indented text items of quoted material becomes fairly generic, where you get little of the sense of the thoughts of the writer. If you must reference others, pull it out, and indent.

**Be precise.** A PhD thesis should be a scientific document which abides to certain standards for the articulation of ideas. It is always sloppy to see a candidate writing $9\times6^3$, where the “$\times$” is a sloppy way of writing a multiply symbol (x) and $^3$ should be “to the power off”. If it’s an equation, it should be pulled out of the text, and a proper equation editor should be used, with a proper numbering system for the equation.

**Every diagram and table should be referenced in the text.** I have read many thesis’ (typically drafts) where the writer just assumes that the reader knows how a diagram or table should integrate with the narrative. Every figure and table should thus be referenced in the text, so that the reader knows when to look at it. If possible don’t break up your narrative with a diagram, and move it a little later on, as long as it is after then text which is referring to it. Don’t ever put a diagram in the text before it is actually referred to, as the reader is left confused as to why the diagram is there.

**Be critical of yourself and others.** One of the key things within a PhD is the ability to critically appraise the work of others, both for the strengths and weaknesses of their work, and also of the candidate’s work. I often circle the first signs of critical thought in a thesis. If it happens on Page 50, there’s a problem in not being able to critically appraise work. Along with this some candidates can think that everything is perfect with their work, and that it addresses every single problem in their field. Try to always define both the strengths and weaknesses your own work, and identify how these could be improved. The scope of the impact should never be overestimated, but also not underestimated. If you’ve developed something that completely changed something, be up-front and tell the reader. Most of the times, be honest to say that you are just enhancing something a little bit.

**A thesis is not a diary!** I have read so many thesis’ which are basically just a chronological flow of their research. You can often spot this as the literature review runs out of references which are up-to-date. I have read several thesis’ where the latest reference in the literature review is two years ago, and it points to the fact that it has not been updated since it was initially written. A literature review should be written for the thesis, and many parts of the original literature can be dumped, and replaced with newer references which fit in with the contribution.

**Focus the literature review on the contribution.** One literature review of PhD thesis I read was almost
200 pages long, and my head was spinning at the end of it. It covered so many points, and few of them actually went anywhere in the following chapters. Try and focus the literature review on covering the 4 or 5 key concepts involved in the thesis, and not in the research project. A good supervisor can often spot redundant sections, and advise for them to be cut. If the thesis is still the same by taking something out, there’s no need for it to be there, as every paragraph and every word should count, and be carefully crafted as part of the whole story.

**Make sure the aim is “of the thesis, and not “of the initial research project”**. Many thesis’ start with “The aim of this research project is ...” which often is a sign that the original project aim has not changed in the writing of the thesis. Overall the aim is the aim of the thesis, as the research project has finished. Every should be written from a point-of-view that the work has finished, and this is the write-up.

**Get the flow right.** A strong flow of literature, method, build and evaluation helps the flow of the thesis, and where you often see references to literature tailing off as the thesis develops. I’ve seen some thesis’ where there are whole chapters that lack any form of reference to other work. This is poor practice as a PhD thesis should show how every aspect of the work fits in with the work of others. I like to see a reference to other work in the introduction of a chapter, as it shows some key influences for the work. I personally don’t like an introduction that says “Section 1 says this, and Section 2 says that, and Section 3 says something else”, as I can see from the table of contents what the contents are. If possible the reader should tell the reader what is likely to be revealed and what the significance is. A reinforcement of the main drive of the work also helps to bring the focus onto the main contribution of the work.

**If you don’t know it ... don’t say it!** This one seems so obvious, but you won’t believe the number of times that you ask in a Viva about the detail of a paper, and the method used, and for the answer to be that they don’t actually know what it does. You always increase your exposure to probing if you include things you don’t quite understand, so dump them (if they are not a core topic).

**Explain it simply.** There’s nothing nicer for an examiner when the candidate takes a complex idea and gives their own viewpoint on it, in a simple way, using new material. It shows that they can articulate complex ideas in a simple way. The standard test for any thesis is that a 14-year old child should, at least, be able to read it, and understand some of the key concepts in it.

**Show that you love the subject and that it is relevant.** Three years is a long time, but the sustainment of interest is a key part of the work, so try and show that this is an important topic and that your thesis is exactly what is required, and in the impact that it could have. Again the Introduction chapter is a great place to grab the reader, and show how important the work is. If possible try and find something that has just happened in the news in the introduction that shows how important your work is. The Introduction chapter, at least, should be readable by all, and where, at the end of it, most readers would want to read on, as it sounds so interesting.

**Make your thesis a sandwich.** With a good thesis, we open with the Introduction and close on the Conclusions. The bit in-between justifies what you have opened with and the conclusions should show what you have uncovered to justify your argument. The same goes for each chapter, where the introduction (half a page, typically) shows what you’re going to tell them, and the conclusion confirms it. Do not make conclusion into a summary, as the reader has no time to read summaries, and just wants you to conclude the most important things that go forward (and so they can dump all the other things that you covered). If possible say why you are not taking some things forward in the conclusions (and justify using the work of others, if possible).

**Don’t just pick without reviewing and justifying.** There is no justification in a thesis for picking something just because it is easy to get. If possible all the things that are selected have at least been reviewed, and a sensible solution is selected (and justified). Try always to select a few competing methods and tools and put them against each other.

**Validate before Evaluate.** You won’t believe the number of Vivas that I’ve done where I’ve asked if they validated their system or software before they went onto evaluating it. So “How do you it takes 5 milliseconds to get from here to there?, the wrong answer is "... because the package said it was 5 milliseconds”. Good experimenters will do “fag packet” calculations, to estimate things and know the
limits of what they expect. I always like to see validation tests within the test data, so that the researcher knows that their system is working correctly. There’s nothing work in finding there is a bug in your results, after you have published them ... so always have a sanity check.

Get that scientific method. There are so many occasions in a thesis where you have no idea what a graph is telling you, as the axis’ are not numbered properly, or where they are poorly scaled. If the variation is between 990 and 1000, don’t draw a graph which goes from 0 to 1000. Work out what the graph is trying to say, and pick the graph type (eg pie chart to show significant of one method against another) to show this.

Must be based on a method and be repeatable. There must be a method in the processes used, and designed in a scientific way. Along with this the thesis should outline the procedure in a repeatable way, so that someone else can perform the same evaluation and get the same results. So candidates should always say to themselves... “Is there enough information for someone to build the artefact?”, “Is there enough information to repeat the experiment?”, and “Do I have the data that the examiner can look at, in order to verify the evaluation?”

Evaluate your method against others. The standard method to show a contribution is to take your method and evaluate it against other competing methods. The best approach is to use the best competing method and show an improvement. This can sometimes be difficult, so, at least, there is an evaluation against other methods. Showing an improvement is obviously a good thing, but there is often nothing wrong with an evaluation which shows a negative impact, especially if it is backed-up with a strong critical appraisal.

Be fair and honest with your experiments. Often an experimental procedure is selected to benefit your own method. If possible be fair on all the methods and do not bias your approach to your one. It does no harm to show weaknesses and downsides to your own contribution, as it gives you a chance to critically appraise and show how future work could improve things. Your experimental procedure and the associated data collection should be repeatable and verifiable, so don’t delete that data you have gathered.

If possible, know your examination team. While the thesis should stand-alone you should also know your examination team before the Viva, so avoid patronising them with background theory which they know inside-out, or provide some background which might help the examiners to understand the area. Often an examiner, as part of the Viva, will give advice on moving things between the core material and appendices, in order to address the target audience for the thesis.

Show that you are now an expert in your area. People expect those with a PhD to be an expert in the area of study, so make sure you know your core principles in the subject area. If you are doing a cryptography PhD read around the subject, and know the core principles of the most important methods. For me, anyone doing a PhD in electrical engineering, for example, should know Ohms Law, and the same should go for other subjects.

Use appendices. Many PhD thesis’ are full of material that is irrelevant to many of the key arguments, and writers are often too sensitive about removing material. If you can, put unrelated material in an appendix, and just refer to it. As a measure, if any material doesn’t help your core arguments, then remove it, as you are wasting the reader’s time.

Quality is better than quantity. Some of the best thesis’ I read have been relatively short and sharp, but where the quality is high. A good eye for moving material in appendices is important and helps the examiner. For some reason, candidates like to produce a thick thesis, and they think that the more pages there, the better the material. This is often the opposite, and a thesis written with self-contained papers for chapters - which link together - are often the best in their presentation.

Define published work. A key part of PhD study is the dissemination of the work, especially with peer reviewed. The examiner often needs to know what has been published.

Watch those unreliable references. In a PhD thesis, the references should be credible and verifiable references, and references to industry-focused white papers or general Web pages cannot be trusted providing credible viewpoints.
Look for small-scale to large-scale experiments. A good researcher will often start small scale and prove the principle, and then look for a large-scale experiment. The sign of small experiments, along with a large-scale experiment which properly evaluates the methods presented, is a good sign of a strong research ethos.

Few abstracts are actually any good in first draft. For some reason most PhD students struggle to write an abstract, and often it is written more as an introduction rather than a distilled version of the thesis. Remember that the abstract is the first thing that the reader reads, so if it is not focused on presenting the whole of the thesis, you have missed an opportunity to get the reader on your side. If possible an abstract should be a page in length, and outline the problem, the contribution, the most significant methods, the thing that has been designed/modelled, what has been evaluated, and what the most significant result is.

Conclusions should conclude the whole thesis. Often the thesis just verifies aims and shows the significance of the results, but it should also recap the key parts of the literature and the other chapters.

Mind those commas. Commas seem to be a dying breed, but are there to help speak directly to the reader. Try and read out loud, and if there’s a slight pause, add a comma.

End on a high! Don’t spoil your thesis, by adding another chapter after the main contribution. Leave the reader on a high, and get them into the Conclusions, and leave the stage. I’ve read a few thesis’ where the last chapter is a real let-down, and contributes very little to the overall focus of the work. If you want, put your lovely new models in an appendix, and refer them in the main chapters, but try and finish the main chapters with the answer to the question posed at the start. The last dot of the last main chapter cements the argument, so don’t run on into something else that you just happens to be which you are currently looking at, as just feel your thesis isn’t thick enough yet!

Sign post your work. Remember the thicker the thesis, the longer it takes to read, and if it doesn’t get to the point, the more annoyed the reader becomes in actually showing how you have addressed the problem and your main contribution. The more focused the thesis, the shorter time it will take to understand it, and the happier the examiner will be when they are reading it. Add pointers to “wake up” the reader and tell them that they really should read this bit ... as I’m telling you something important.

Guide but stay on the academic track. Guide them through difficult areas, and allow them to learn from your love of the topic and your new insights, but stick to well-defined academic principles for writing a thesis ... such as not adding your own opinions in literature review parts. Leave your thoughts for the conclusion section with a chapter. Try not to hint that you’ve solved every problem in the area, and rely on showing your contribution on the back of others, including within the main conclusions.

Be humble. Show that you are humble in your writing and respect (and know) the most important people in your area (including your external examiner), and that you want to be an active part of your community, and help them. The PhD is not an end-stop, but shows how you will work in the future ... either in academia or industry. So just because you are off to a job in industry, doesn’t mean that your research career ends at the graduation ... you have standards and methods to set for others to follow.
This Health and Safety section provides a summary of the major Health and Safety issues of which all staff and students should be aware; for further details see the School Health and Safety Policy Document\(^2\).

### 17.1 Fire, Emergencies and First Aid

#### 17.1.1 Fire Safety Arrangements and Requirements

All staff and students are expected to respond promptly to all fire alarm activations (except the weekly tests at specified times). Staff who are responsible for groups of students or visitors at the time of an alarm are expected to stop teaching or speaking, and to lead the whole group in the evacuation procedure.

**Fire Detection**

Kilburn and IT Buildings are fitted with automatic detectors supplemented by break glass points located throughout each building. These activate the buildings audible alarm in the event of fire or smoke. The automatic detectors allow early detection of any developing fire.

If you discover a fire and the building alarm is not sounding, activate the nearest break glass point on your escape route and evacuate the building immediately. Make your way to the building assembly point and await further instruction. If possible you should inform security of the event and supply them with as much information as possible in order for them to evaluate the risk and to take appropriate action.

**Fire Alarm**

The audible alarm for Kilburn building is a two stage system:

**Stage 1** An intermittent alarm — be prepared to evacuate the building.

**Stage 2** A continuous alarm – evacuate the building immediately.

The audible alarm for IT building is a single system. Upon hearing the fire alarm it is necessary to evacuate the building.

In the event of the alarm being activated Security will attend in the first instance.

\(^2\) [http://staffnet.cs.manchester.ac.uk/acso/healthpolicies.php](http://staffnet.cs.manchester.ac.uk/acso/healthpolicies.php)
Fire Evacuation Procedure

On hearing the fire alarm all occupants should evacuate the building immediately by their nearest available exit.

- Do not use lifts.
- Do not return to offices to collect belongings.
- Go to Building Assembly Point.

Fire action notices are located throughout all buildings on campus summarising the specific local fire safety arrangements. Local fire notices also indicate the nearest fire assembly point. Evacuation Marshals are located throughout the building (identified by hi-visibility vests in an alarm situation) and are instructed to provide assistance and direction in the event of the fire alarm being raised.

Danger: DO NOT RE-ENTER THE BUILDING UNTIL THE EMERGENCY SERVICES OR SECURITY HAVE ADVISED YOU THAT IT IS SAFE TO DO SO.

Means of Escape

Means of escape are signed throughout the building. Green running man signs indicate the nearest emergency exit. You should familiarise yourself with the nearest means of escape within your local working area, as well as alternative routes should your main means of escape become inaccessible.

Fire Alarm Test

The fire alarm is tested weekly at the following times, and should last for no longer than 20 seconds:

- IT Building - Thursday at 2:00pm.
- Kilburn Building - Wednesday at 1.45pm.

Fire Extinguishers

Fire extinguishers are provided extensively throughout all University buildings and should only be used by personnel specifically trained in their correct operation.

Automatic door closers

Throughout the Kilburn and IT buildings many of the fire doors are allowed to remain open during the day by means of an automatic fire detection door closing system. These units are designed to release the door following a continuous constant sound of 65 decibels and above, for a period of 20 seconds or more.

Link bridge

The Kilburn and IT buildings have separate fire alarm systems in place. The link bridge between the Kilburn and IT buildings has been fitted with a flashing beacon, connected to the fire alarm system, which is activated during an emergency situation. A Marshal will be stationed on the bridge to assist occupants of the vulnerable building to escape in an orderly manner and to prohibit re entry.
17.1.2 Emergencies

In the event of any emergency, medical or otherwise, please contact the emergency services by calling 9999 internal or 999 external line. The University Security Office must also be informed once the emergency services have been alerted by calling 69966 internal or 0161 306 9966 external line. The School Health and Safety Advisor must be notified of any emergency by calling 56118 internal or 0161 275 6118 external line.

University Security telephone number can be found on the reverse side of your University staff/student card.

The School Health and Safety Advisor must be notified of any emergency by calling 56118 internal number 0161 275 6118 if dialled externally (07917558862 mobile number).

17.1.3 First Aid

The School has a number of trained first aiders in the Kilburn and IT buildings able to provide basic first aid as required. Details of current first aiders are available on first aid notices located next to each fire notice and can be found near to every exit point of the building, on notice boards throughout the buildings. If local first aiders are not available or assistance is required outside normal working hours, Security can be contacted to provide first aid by calling 69966 internal or 0161 306 9966 external line.

17.1.4 Emergency Evacuation Marshals

The University requires that all Schools appoint suitable numbers of emergency evacuation marshals to assist in the evacuation of all occupants from the buildings should an emergency situation arise. The criteria used for identifying the number of evacuation marshals required is one marshal per floor per protected stair case. In the school of Computer Science a Marshal is also required to be posted on the link bridge between the Kilburn and IT buildings to ensure no one enters one building from the other during an emergency situation.

17.2 Accidents and Incidents

All accidents, dangerous occurrences and near misses must be reported in the first instance to the School Safety Advisor and documented as necessary using the correct form. Accident and incident forms are available via Safety Services.

Reporting of accidents and incidents are necessary for the following reasons:

- To comply with legal requirements depending upon the nature of the accident or incident.
- To investigate the accident / incident and take steps to prevent recurrence.
- To keep records in case of possible future litigation.
- To allow collation of accident statistics.

Near misses should also be reported to your School Safety Advisor as acting upon near misses will prevent accidents occurring.

17.3 Electrical Equipment

Any electrical equipment brought into the school for use in offices, laboratories or workshops must be suitable for the intended purpose, meet UK requirements for safety, and display the CE universal quality standard mark. The School

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3 http://www.healthandsafety.manchester.ac.uk
Health and Safety Advisor must be informed if any electrical equipment is brought into the school other than via the normal purchasing system. For the school to comply with health and safety legislation it is essential for all portable appliances, including those built at The University of Manchester, to be checked and tested on a regular basis. The school carries out Portable Appliance Testing in accordance with university guidelines and maintains a database of all such equipment. Checks and tests are carried out at regular intervals. High risk portable appliances (Heaters, power supplies, electric drills, kettles, etc) are checked and tested annually. Lower risk items like computer workstations, which are classed as semi-permanent fixtures, are checked and tested every four (4) years.

All portable appliances, including separate mains cables will be clearly labelled upon completion of the test. A recommended retest date will be indicated on the label.

Please ensure that ALL heaters and high load non-essential appliances within your working area are switched off before you leave the building.

17.4 Lone Working and Out of Hours Working

17.4.1 Lone Working

Lone working is defined as working without close or direct supervision, and without contact form others.

To reduce the risks associated with lone working it is the policy of the School of Computer Science not to permit any lone working activity beyond normal office based activities without first completing a risk assessment for the activity.

The requirements of the University guidance on Lone Working⁴ should be followed at all times.

Out of Hours Work

Entry to the Kilburn Building outside of normal hours (before 08.00 and after 18.00 Monday to Friday, plus all day at weekends and bank holidays) requires an out of hours pass (which can be obtained from the Student Support Office). During this time the presence of security or school staff members cannot be guaranteed. It is therefore extremely important that all occupants know what to do should an emergency situation occur within the school such as a fire, or the need for medical attention.

Kilburn Building

Use of the Kilburn building outside normal working hours will be permitted following successful completion of the out-of-hours induction online training course. Upon successful completion of the out-of-hours induction training, the following access times will be made available for masters students: 6pm — 11.30pm Monday – Friday, 8am — 11.30pm Saturday and Sunday.

Outside normal working hours the Kilburn Building is to be used for study and research (office based) purposes only, and access is restricted to the Lower First floor. No social events or gatherings will be permitted unless an appropriate member of staff has been notified and has agreed to the event. Depending upon the details of the event it may be necessary to complete a risk assessment (see out of hours events section below). Please contact the School Safety Advisor, Tony McDonald¹, for guidance and further information.

Information Technology Building

Outside normal working hours access into the IT building is gained via the south entrance door only. Swipe access is required and the out-of-hours book must be signed by all users detailing name, work location and times of entry and

⁴ http://documents.manchester.ac.uk/display.aspx?DocID=13891
¹ mailto:tony.mcdonald@manchester.ac.uk
exit. The swipe card access system for the IT building is only enabled for staff and postgraduate students based in the IT building who have undertaken the necessary local and health and safety inductions.

**Occupants of the buildings remaining on site after normal working hours**

Any person wishing to remain in the buildings outside normal working hours must sign the appropriate out-of-hours books. The out-of-hours book for the Kilburn Building is located at the porter’s lodge; the-out of-hours book for occupants of the IT building is located in the foyer of the building by the main entrance.

This procedure is necessary should an emergency situation occur. Responding emergency services must be able to account for all personnel on site during an emergency situation such as a fire or bomb scare.

The school reserves the right to spot check anyone on site outside normal working hours to ensure that this procedure is being followed. Anyone found not to have followed the correct procedure may be asked to leave the building, and may be suspended from out-of-hours activities for a period.

Please remember that authorisation to use The Kilburn and IT buildings outside normal working hours is a privilege, and not an automatic right, and that there is no right of appeal for anyone excluded from out-of-hours access to these buildings.

**17.5 Chemical Safety**

Any chemical(s) brought into the School for experimental, practical or general use must be controlled and a risk assessment carried out to ensure that the chemical is used, stored and disposed of safely.

**17.6 School smoking policy**

To comply with current Government legislation The University of Manchester promotes a no smoking policy within all buildings, irrespective of their use or location. This policy also applies to e-cigarettes. To safeguard staff, students and visitors from the adverse effects of second hand smoke, and to show unity with other schools, the School of Computer Science has adopted a no smoking exclusion zone within 5 meters of all school entrances and exits of the school buildings. Smoking is also prohibited directly outside open windows where smoke may drift into school premises. Your assistance in keeping the school of Computer Science a safe and healthy place to work and study in is much appreciated.
CHAPTER EIGHTEEN

WELLBEING

The University has a wealth of resources, support and advice on Wellbeing for postgraduate researchers ranging from online resources on reducing stress and tension through to talking to counsellors at times of greater need.

These resources and support are there for you to use – if you feel well, you will do well. We are always looking at ways to improve and the University will be working on a project over the next 18 months which will aim to identify ways to improve the provision and support for the wellbeing and mental health of our postgraduate researchers.

Based on research by the New Economics Foundation, the University has identified the six ways to wellbeing: six actions to build into your day-to-day life in order to feel good and function well.

Being well doesn’t need to be hard work, it could be taking a walk, meeting a friend for a coffee or simply smiling at someone. Have a look at these pages to see how you can implement these was into your daily life, you may even be doing some of them already.

We need PGRs to be closely involved and inform the work and outcomes of the project so over the next few months we will be asking you to join group discussions and provide us with your ideas and opinions on wellbeing and mental health.

1 http://www.studentsupport.manchester.ac.uk/taking-care/wellbeing/
CHAPTER NINETEEN

STUDENT SUPPORT AND GUIDANCE

19.1 School & Postgraduate Student Support Staff

**Head of School:** Prof Robert Stevens\(^2\), Room: IT Building 114, Phone: 0161-275 6251.

**PGR Director:** Simon Harper (PGRD)\(^3\), Room: Kilburn Building 2.60, Phone: 0161-275 0599.

**PhD Manager:** Dr Eva Navarro lopez (PhD Manager)\(^6\), Room: 2.103 Kilburn Building, Phone: 0161 275 6209.

**EngD Manager:** Professor John Goodacre (EngD Manager)\(^5\), Room: IT4.11 Information Technology Building, Phone: 0781-8874885.

**CDT Manager:** Dr Jon Shapiro (CDT Manager)\(^4\), Room: Kilburn Building G16, Phone: 0161-275 6253.

**Student Support Office:** Student Support\(^1\), Room: LF21 Kilburn Building, Phone 0161 306 8155 (internal extension 68155)

**Disability Advisory and Support Service (DASS):** The DASS provides support for disabled staff and students in the University and also offers support and advice to prospective students and employees. They provide a confidential service and enable management of the level of disclosure within the University in order to provide agreed support. They work with a wide range of students, including students with specific learning difficulties (such as dyslexia), mental health difficulties (such as anxiety), medical conditions (such as epilepsy and arthritis), deaf and hard of hearing students, blind and partially sighted students, and students with autism/Asperger syndrome. Disability Advisory and Support Service\(^7\) (DASS)\(^8\) Phone: 0161 275 7512 Location: 2nd floor, University Place.

**Student Guidance Service (formerly known as the Academic Advisory Service):** This offers confidential advice on any matter relating to your studies or any issue affecting you and your academic progress. It is independent from Faculties and Schools, completely confidential, and is run by a small team of part-time advisors, some of whom are members of academic staff.

**Housing & Accommodation Issues:** The Accommodation Office deals with student accommodation in the University Halls of Residence. Separate halls are available for undergraduates and postgraduates, but the University also has halls comprising a mix of both.

\(^2\) mailto:robert.stevens@manchester.ac.uk
\(^3\) mailto:simon.harper@manchester.ac.uk
\(^4\) mailto:jonathan.l.shapiro@manchester.ac.uk
\(^5\) mailto:john.goodacre@manchester.ac.uk
\(^6\) mailto:eva.navarro@manchester.ac.uk
\(^7\) http://www.dass.manchester.ac.uk
\(^8\) http://dass@manchester.ac.uk
Manchester Student Homes: is a service for students, owned and run by the University, along with Manchester Metropolitan University (MMU). The services are free to students. They list a large number of privately-rented accredited houses, flats and rooms and are also there to give you housing advice if you need it.

Students Union: The University of Manchester Students’ Union (UMSU) is an organisation, independent of the University, to which all students automatically belong. The Student Union building houses a wide range of services for students, including welfare and legal advice.

Health & Health Care: Upon arrival in Manchester, all students should register with a local General Practitioner (GP). In order to receive National Health Service (NHS) treatment whilst you are in Manchester, you must be registered with a local doctor.

Registering with the doctor will enable international students, their spouse and children (but not visiting relatives) to receive free medical care, provided that they are in the UK for six months or longer.

A list of GPs can be obtained from the staff in University Accommodation. Alternatively, a complete list of GPs, dentists, and pharmacies in Manchester can be obtained online from the NHS Services Directory. Further advice on health issues and health services for students can be found on StudentNet and on the University pages for international students.

Student Counselling Service: This is a team of professional counsellors and psychotherapists offering confidential help with any personal issues affecting work, self-esteem, relationships, mental health or general well-being. They are available to all University of Manchester students.

Careers Advice: The University Careers Service provides careers information, advice, and guidance to all Manchester students.

Immigration Advice: Advice on UK immigration legislation is offered by the International Advice Team based at the Student Services Centre:

International Students: International students at the University are especially fortunate to have the support of a dedicated International Advice Team based in the Student Services Centre and the International Society based on the Oxford Road. The Students Union provides the services of an International Students Officer as well as a large number of international societies.

University Language Centre: The Manchester University Language Centre offers courses in some 18 languages for personal, professional and academic purposes at various levels to prospective and current students. In particular, it provides programmes for students wishing to improve their English language skills for academic or professional reasons.

19.2 University Learning Resources

19.2.1 The University Library

The University of Manchester Library is both the University’s library and information service and supports all subject areas taught by the University. It provides its members with a large number of services and resources, including the most extensive range of electronic resources of any UK Higher Education library, including on-line subscriptions to journals and data sources. Many of these resources are only available to computers on the University network, so you should use them from on campus, or using the campus VPN.

The University Library consists of the Main Library and several site libraries. Locations, and full details of the services provided and how to access them can be found on their website.
19.2.2 Central Authentication Service

One advantage of this central system is that when accessing online journals, rather than having to remember a whole list of different passwords and usernames, you instead just use the CAS. The journal website typically directs you to the Manchester CAS page, where you login, and are then returned to the journal, where you can then access the journal content to which we have a subscription.

The login can also be accessed directly by going to the University Portal: and then pressing the login button.
The University Ordinances and Regulations: Degree of Doctor of Philosophy (PhD) are many and complex - but you can get help at Student Support Office to find what you are looking for.

20.1 Submission and Completion

A crucial policy for you to know is that you must submit your thesis within 4 years of starting, unless you have an approved extension or interruption (see next section). Both an electronic copy and a hard copy of the thesis is required, and the submission date is defined as the date that the hard copy is received. The closing date for the electronic copy to be received is two-days before the final submission date.

If you take longer than your degree time (e.g. you are on a three-year PhD and you haven’t finished your degree after three years), you cease being registered on your degree programme and will need to request permission to register as “submission pending”. The relevant University policy is Circumstances Leading to Changes to Postgraduate Research Study Policy.

You will need to fill in an End of Year 3 form, available on eProg or from the Student Support Office.

There is no submission pending for four-year degree courses.

20.2 Attendance Monitoring

20.2.1 Extensions and Interruptions

If you become unable to function as a research student for any reason, the first thing you should do is to make sure your main supervisor knows. Alternatively, you may choose to talk with your advisor, the PGR tutor or PGR director, someone from the counselling service, or your GP, as appropriate. If you need to interrupt your studies for a period of time, you can request an interruption. The relevant policy is also in Circumstances Leading to Changes to Postgraduate Research Study Policy.

You need to apply to FSE Faculty Graduate Panel and some documentary evidence may be required. This may be due to your own ill health, illness or death of someone close to you, or similar types of issues which prevent you from carry on with your research for a time. It cannot be for reasons associated with your research not going well and cannot be used just to extend the time to get the degree.

It is best to apply for an interruption as soon as you recognise the problem and are able. Retrospective applications are less likely to succeed, unless the nature of the mitigating circumstance made it very difficult for you to apply at the time. Once you pass through an End of Year progress point, you cannot apply for a mitigating circumstance which took place before the progression.

1 mailto:compsci-sso@listserv.manchester.ac.uk
2 http://www.eprog.manchester.ac.uk
There are also circumstances where it may be appropriate to extend the 4 years. This could happen, for example, if you have a breakdown of equipment or are unexpectedly awaiting for delayed equipment which is essential to your research. In these circumstances, an extension can be requested to EPS Graduate Panel. Again, look at the policy document for more details.

20.3 Plagiarism and Academic Malpractice

Reputation is the most valuable commodity a researcher has. By extension, it is most valuable to a research-led University. Therefore, the University of Manchester takes academic malpractice including plagiarism extremely seriously. So, don’t do either of the things mentioned in the title of this section.

Examples of academic malpractice are: presenting work of others as your own, and presenting work which has not really been done as having been done (e.g. falsifying data). Remember, plagiarism can mean copying words, but also copying ideas. Also, you will need to discuss with your supervisors how to deal with their ideas in your thesis, since only your name is on the title page.

Academic malpractice is defined by the University in this Guidance to students on plagiarism and other forms of academic malpractice.

Academic malpractice is any activity — intentional or otherwise — that is likely to undermine the integrity essential to scholarship or research. It includes plagiarism, collusion, fabrication or falsification of results, and anything else that could result in unearned or undeserved credit for those committing it. Academic malpractice can result from a deliberate act of cheating or may be committed unintentionally. Whether intended or not, all incidents of academic malpractice will be treated seriously by the University.

All students should read this document. You should also read Regulation XVII ‘Conduct and Discipline of Students’. Another relevant document is “Academic Malpractice (Collusion, Fabrication and Plagiarism)”.

The consequences of academic malpractice are very serious. For an assessment, you may receive a mark of zero for that unit, with no opportunity to resit. For a research degree, penalties can be as great as expulsion from the University without the award of the degree. If it is discovered after the degree is awarded, it can result in being stripped of the degree, as well as a loss of ones job and reputation. There have been several recent, high-profile examples, such as the 2011 case of a German defence minister (http://www.bbc.co.uk/news/world-europe-12566502).

A basic student guide to referencing and avoiding plagiarism, and links to more comprehensive resources are available. All students should make sure they are familiar with what the university expects from its students. All PhD students are also required to complete a plagiarism course.

In view of the serious consequences of plagiarism and academic malpractice, it is essential that all students familiarise themselves with the accepted format for referencing work in their discipline, and that they start using the accepted form as soon as possible. Ignorance of the proper format, or ignorance of the definitions of plagiarism and academic malpractice used by the university, is not a valid defence against a possible claim of plagiarism or other instance of academic malpractice.

Some students want to run their theses through TurnItIn to see if there is too much overlap with their publish work or other works they have cited. The University will not allow students to use its license for this, but you can do it from the TurnItIn student site https://www.writecheck.com/static/home.html. You have to pay for this. You should do this in such a way that your thesis does not get stored in the TurnItIn database, otherwise if you (or anyone) every runs it through again, it will return a 100% match. This information is not a recommendation for you to do this; it is simply here in case you want it.
20.4 Discrimination, Bullying, and Harassment

Discrimination, bullying and harassment come in many guises, all of which are unacceptable to the University and which have no place in a civilised working and learning environment.

Any cases of harassment, discrimination and bullying will be taken very seriously by the University and, where necessary, the appropriate procedure will be used to investigate complaints. The documents below outline the roles and responsibilities of the University, staff and students in constructing a non-discriminatory learning environment.

20.5 Finding a policy document

Unfortunately, the University has a host of policy documents pertaining to Postgraduate Research Students, and it can be daunting to go through them to find what you are looking for. Here are some useful places to look.

University PGR Code of Practice: The University has a code of practice which is sort of a road map of the relevant policy documents which describe what you can expect from the School and your supervisors, and what is expected of you.

School Charter: The School has produced a PGR student charter, which gives the School’s view on what can be expected from us and from you. It is short and worth reading.

eProg expectations form: During your first few weeks here, a form will appear on eProg (see section eProg2) called the expectations form. The first part of this contains links to 9 relevant policies, which you are asked to read and discuss with your supervisor. This will help ensure you know what the policies are.

20.6 Student Representation

There are several ways in which students can give feedback to the School and University. First, there are the mentors; and mentors act as student representatives. So, if you have an issue about how the school is run, you can bring it up to one of the mentors. Or become a mentor. You can also discuss it with the PGR Director.

There is a Postgraduate Research Experience Survey (PRES) conducted yearly across all Universities. We get the results broken down by school. In the past the University has changed its procedures (notably its orientation procedures) based on the outcome of this, so do fill it in when you hear about it. It usually takes place in the late spring.

20.7 Ethical Approval

All research involving human or animal subjects has to be approved by the University Ethical Approval mechanism. This includes usability studies for software and hardware systems and HCI evaluation of systems. To get approval, contact the Ethical Approval Officer in the School.

20.8 Complaints Procedure

The University has a formal Complaints Procedure. Most complaints are most quickly and effectively dealt with locally. Contact your supervisor, advisor, PGR tutor, or PGR Director. If it is of a general nature (e.g. resource allocation), mention it to one of the mentors, so it can be raised at a PGRSSCC meeting. If it involves the environment (e.g. heating), send an email to any of the local CS estates staff. If it involves an IT problem, raise a ticket on the CSIS system (see section [item:CSIS]). If you are dissatisfied with the response, put the complaint in writing to the Head of School, unless it involves actions taken by the Head of School, in which case put it in writing to the Dean of the
Faculty of EPS. If you still dissatisfied, you should refer the matter formally and in writing to the University Registrar and Secretary. See the complaints procedure document for instructions how to do this.

If you need help using the procedure or guidance on where to refer your complaint, you can seek advice from any of the following: The Academic Advisory Service, the appropriate Faculty or School Secretary, the office of Student Support and Services, or the Students’ Union Advice Centre (Students’ Union, tel. 275 2930).

The Complaints Procedure does not cover the following:

- disciplinary issues (for which a separate procedure exists)
- matters where other separate procedures apply, e.g. harassment, academic appeals relating to examinations or assessments, appeals against exclusion on academic grounds, or against refusal to be issued with a Certificate of Satisfactory Work and Attendance, or Complaints about the Students’ Union.

Information on these separate procedures can be obtained from the University’s policies webpage.
CHAPTER
TWENTYONE

INDICES AND TABLES

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