



**UNIVERSITY OF
STIRLING**

Research Student Guide

Computing Science & Mathematics Department

Overview

Research students in Computing Science or Mathematics at Stirling can study for a PhD or MPhil. This document is intended to act as a manual, for both students and supervisors, on the process and regulations relating to those degrees. It starts by giving an overview and introduction to being a research student (including information on what to do on arrival and background information on the library and other facilities). The bulk of the document is then dedicated to the process of doing a degree by research, including the various deadlines throughout the degree and, finally, graduation.

These guidelines are written to help Computing Science research students; a general set of guidelines for research students is available from the university at: <http://www.research.stir.ac.uk/postgraduate-information/handbook/documents/PGRHandbook.pdf>

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Department of Computing Science, University of Glasgow,
and is produced with their kind permission.*

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INTRODUCTION TO BEING A RESEARCH STUDENT

This section gives an overview of being a research student. It starts with a general introduction to the nature of research then discusses the supervision set-up, the time scales for research degrees, Department research activities, and resources available to students. Major actions and deadlines are highlighted in bold. These are summarised for convenience at the end of the document.

Doing research

Research is the basis for advancement in science. It involves getting to know an area in great depth and carrying out some work of your own to advance the state of knowledge in that area. An MPhil may be typified as taking existing research and applying it in a new area, while a PhD will tend to modify and expand the work of others to nudge the research field forward. Both are based on a question for which the written thesis acts as a structured, detailed argument answering the question.

Degrees conducted by research are very different from taught degrees: students are not taught material and expected to learn it for exams, but are expected to find and understand material on which their work builds and to which their work is related. An MPhil can be considered as deepening the student's knowledge in a small area of Computing or Mathematics, while a PhD will make him/her expert in a very small domain of Computing or Mathematics and to make a publishable contribution.

Of course, when starting, students may have little idea of how to conduct the independent research and work that is required to attain a degree by research. Therefore, each student will work closely with a supervisor. It is the supervisor's responsibility to guide their students through the process and skills training required to be a successful researcher. Both the Department and University give support through training schemes, monitoring procedures and facility provision. We believe that Computing Science & Mathematics at Stirling provides an excellent environment for supporting work towards research degrees. But ultimately it's up to the individual student.

Students have to be motivated and put in the work. Research is, in essence, exciting: one gets to study what one wants, explore fascinating ideas, and work with interesting people who share the same enthusiasm. But it can also involve a lot of hard work, and even moments of self-doubt; by its very nature, research entails exploration of uncharted territory. Our friendly and supportive environment will help maintain students' self-confidence; our research strength and depth will help to guide their exploration. Unfortunately however, there will be some who fall by the wayside. Success in research requires motivation, insight, tenacity, sheer hard work, and sometimes good fortune, as well as innate ability. Early identification of problems may help redirect some students, hence the Department's monitoring processes.

This document will give an overview of many of the issues which will affect students throughout their degrees. Students planning a PhD, and their supervisors, should also read Phillips and Pugh's excellent *How to get a PhD* which covers the process and provides a comprehensive discussion of how to manage different aspects of a PhD and how to avoid common pit-falls. This is in the library.

MPhil vs PhD

Research students are normally admitted to the Department to study for a postgraduate degree by research. Normally there is no *a priori* distinction between prospective PhD students and prospective MPhil students, although most will be aiming for one degree or the other from the outset. The degree

for which a thesis is ultimately prepared and submitted will depend on the progress of the individual student, particularly during the first year of enrolment.

Supervision set-up

Each student will be allocated a supervisory team from amongst the academic staff. This will include a first supervisor with primary responsibility for the student and a second supervisor who may be experienced in the student's area of research.

The relationship between student and first supervisor is critical. It is the responsibility of the supervisor to advise and guide the student in all aspects of the research. In order to obtain appropriate continuity of supervision and adequate attention from the supervisor, a student should expect, at the very least, one hour per week of the supervisor's dedicated time. While the university recommends a meeting at least once every two months, we strongly recommend meeting about once a week. With such a frequent meeting pattern we generally do not maintain a formal record of meeting; but would rather you keep a record of the meetings as part of your logbook. You can of course maintain a more formal record as set out in the university handbook if you so desire.

The role of the second supervisor is to provide another perspective on the work and as such should meet the student at least once a semester and once over the summer. It is the responsibility of the supervisor and research student to arrange these meetings.

Ultimately, the Head of Department is responsible for the appointment of supervisors; in practice, this task is largely handled by the Research Committee (RC). For a variety of reasons, a student or one of the supervisory team may feel that a change in the team is appropriate. All requests and proposals of this kind should be made to the convenor of the RC in the first instance.

If you have any problems, first discuss them with your supervisor or second supervisor. If there are things you would prefer to discuss confidentially then come and talk to the RC convenor.

Standard time scales

The University lays down strict deadlines for research degrees. The following is excerpted from the University Calendar and is correct at going to press. Please check online for up to date information.

Degree	Minimum period of study from date of initial registration	Maximum period of study from date of initial registration	Period after date of initial registration thesis expected	Last date after date of initial registration for submission of thesis expected
PhD (f-t)	2 years	4 years	3 years	4 years
PhD (p-t)	3 years	8 years	6 years	8 years
MPhil (f-t)	1 year	3 years	2 years	3 years
MPhil (p-t)	2 years	6 years	4 years	6 years

Ideally column 3 above would also be the norm. However, in practice many students do not finish within this period. Although common in the past to overrun, there are now serious restrictions on how long a PhD can last, mainly owing to financial costs either on the student or the Department. Most funding bodies will pay for only the first three years' fees for PhD study. Furthermore, our main

funding body, the EPSRC, counts all students who have not submitted within four years as failures when calculating our success rate. These *failures* affect our standing with funders such as the EPSRC.

With the inevitable risk of slippage it is essential that students target completion for three years from the start of their PhD. The content of these years is discussed further below.

Students who suffer from ill-health to the extent that this affects, or is anticipated to affect, their completion timetable should inform their supervisor and the convenor of RC as soon as possible. Many funding bodies will (quite readily) permit an extension of up to six months in studentships for people with documentary evidence of illness (Maternity leave is also often given).

<http://www.epsrc.ac.uk>
<http://www.research.stir.ac.uk/postgraduate-information/handbook/documents/PGRHandbook.pdf>

Part-time study

The main differences for part-time students are, of course, to do with time:

The minimum periods for part-time study are longer (as described above).

Viva Records (see below) are normally due to the convenor of RC at roughly 18 month intervals – the first report being due at the end of 15 months of study, Of course the timetables are more flexible for part-time students and are more likely to be adjusted to fit individual circumstances. These deadlines should be used as norms as they balance overloading part-time students with reports and leaving long periods without check.

The Department can be flexible on working practices, but we recommend that home part-time students meet their supervisor at least monthly, and that EU or overseas students make at least one study visit of 3-4 weeks per year.

Note: For simplicity, the rest of this document is primarily written with full-time PhD students in mind. The timetable of reports may be adapted to suit individual MPhil students.

Research groups and Departmental Seminars

Research groups in the Department are organised around the main research themes. Some groups meet weekly in term time, others meet less regularly. During each meeting, one member of the group takes the responsibility of presenting a talk on something of current interest to him or her (and hopefully others), or of leading a discussion on some general issue relating to the interests of the group.

It is a requirement that every research student be an active member of at least one of these discussion groups, but of course they are welcome to attend others.

The Department also organises regular seminars at which invited speakers give talks on a variety of aspects of our subject, talks that are intended for a general audience but which relate to some research work of the speaker. The Department regards regular attendance at these seminars as an essential part of the education of its research students.

<http://www.cs.stir.ac.uk/research>
<http://www.cs.stir.ac.uk/seminars>
<http://www.maths.stir.ac.uk/seminars.html>

PG Tips

An important skill that all researchers require is that of presenting their work to others. All research students have to learn this skill and, in time, will be expected to give talks to specialist discussion groups within the department. *PG Tips* provides an opportunity for research students to make presentations to their peers. The meetings are organised and attended by research students (with staff present only by invitation). However student attendance is essential. Meetings are normally held monthly, and each research student is expected to contribute one or more talks dealing with his/her own research. In addition to providing an informal atmosphere for presentation, *PG Tips* gives students a useful opportunity to learn something of the work of their fellow students and of other research groups. Attendance at *PG Tips* meetings is very strongly recommended.

Rosalyn Porter (contact)
pgtips@cs.stir.ac.uk

Student Mini-conference

Each year in the break between semesters a day of research student talks is held. Usually this is in the last week of January. Each student presents a short talk (first year students typically have 15 minutes¹, others 20-30 minutes). All staff are invited to the talks. Attendance is compulsory for all research students.

Graduate School research training courses

The Stirling Graduate Research School (SGRS) runs a series of training courses for new research students. These include presentation skills, library skills and general research skills that will be required throughout a research degree. Programme details are sent to all new students prior to arrival. Attendance at these courses is highly recommended.

k.m.reibig@stir.ac.uk
graduate.research@stir.ac.uk
<http://www.research.stir.ac.uk/postgraduate-information/sgrs/index.php>

Senior taught modules

The various lecture courses given by the Department contain much advanced material ranging over a wide spectrum of computing science and mathematics. Few research students will be familiar with all of this material, so attendance at some of these courses provides a good opportunity for broadening knowledge of the subject. All research students are encouraged to widen their horizons in this way. In the case of first year students, attending appropriate courses may be one of the formal requirements laid down at the initial planning meeting. Of course, attendance at all courses should be approved in advance with the lecturer of the course.

Conversely, the courses can provide a mechanism for those doing a PhD to gain some lecturing experience. Final year PhD students are strongly encouraged to discuss this option with their supervisor and the appropriate module co-ordinator for their research area.

<http://www.cs.stir.ac.uk/courses>

¹ Students who start in the new year need only give a 10 minute talk.

Tutoring and demonstrating

Each year a number of paid positions as tutors and demonstrators are available to research students. *Demonstrators* are involved with laboratory work for more elementary undergraduate classes. *Tutors* have responsibility for a tutorial group of year 1 or 2 students. As well as providing a source of income, these duties can give valuable experience for those considering lecturing as part of their future careers. Interested students should discuss options with their supervisor and the appropriate members of staff as early as possible, and certainly before the start of semester. Funding bodies typically impose restrictions on the number of hours work a student can do. The Department restricts non-PhD work to a maximum of 6 hours per week for all full-time students during semester, with an annual maximum of 180 hours. If a student faces particular financial hardship within these limits, special arrangements may be possible and should be discussed between the student and the supervisor.

Savi Maharaj (teaching co-ordinator, Computing Science) sma@cs.stir.ac.uk
Adam Kleczkowski (teaching co-ordinator, Mathematics) akr@maths.stir.ac.uk

Library

Research students are required to join the library. You will be given increased lending privileges compared to those of undergraduate students and will have full access to the University Library's research support services including the current awareness and inter library loan services, Web of Science and electronic MathSciNet.

<http://www.is.stir.ac.uk/>

The Research Committee (RC)

The research committee is responsible for overseeing and steering the department's research as a whole. The committee, with the supervisors, is also responsible for the day to day handling of research student matters from applications through to submission and viva arrangements. All staff and students can raise items for RC discussion with any committee member. In addition, students experiencing problems or difficulties should feel free to approach RC members at any time, or to raise matters with the student representative on the RC.

Evan Magill (Convenor, Admissions)
Grace McArthur (Secretary)
Jesse Blum (Research Student Representative 2008/9)

University

The University manages the registration process for new students and overviews their progress. In particular they require a report after 10 months. They are also closely involved with the final viva. Often dealings with the university administration will be through your supervisor.

<http://www.research.stir.ac.uk/postgraduate-information/sgrs/index.php>

Common room and coffee club

All research students are welcome in the Department common room, and are encouraged to come to lunch and coffee to chat with staff and other students not in their area of research. Lunch tends to be 12.30-1.30 and coffee times 10:30-11:00 and 3:30-4:00 daily. In the common room you will find a kettle and microwave for general use. In addition a coffee club is run which provides endless supplies of tea and coffee. Email the organiser to join or add your name to the poster in the common room. Please do not use the tea and coffee if you have not joined the club.

Graham Cochrane (Coffee Club Organiser)
gco@cs.stir.ac.uk

Stirling University Student Association

On a more social level, the main social focus for students is Stirling University Students Association (SUSA). SUSA's main function is representation, and beyond this it is specifically concerned with the lives of students in Welfare, Rights, Clubs and Societies, Sport, Bars & Catering, and Entertainments, Campus Media and Campaigns on any student-relevant issues. Further to this SUSA provides a number of additional services in terms of general information and support, shop, print room, and its bars and catering facilities. All students automatically become members of SUSA. The SUSA offices are in the Robbins Centre (at the top of the stairs to the Robbins Centre). There are also many different University societies covering a huge range of social interests. SUSA can give details of these.

<http://www.susaonline.org.uk/>

ON ARRIVAL

On arriving in the Department, you will probably make contact with your supervisor first. You should also call at the Departmental Office (Room 4B80) where you can collect a key to your room and meet all the administrative staff.

In addition, new arrivals should visit a member of the technical support staff to obtain an account on the Departmental network. You will find them in Room 4B81.

*(Departmental) Computing Support Group: csg@cs.stir.ac.uk
(University) Information Services: helpdesk@stir.ac.uk*

RESOURCES

Student offices and equipment

Each research student will be assigned to an office shared with a number of others. Assignments are not normally changed during an academic year. However, if necessary requests to change room can be made to your supervisor. The best time to request a room change is in early July as these requests can be taken into account with the allocation of new arrivals in October.

Each research student will have a computer, a desk, a chair, a share of a filing cabinet and access to shelf space. Research students are given 24-hour access to the Department.

All members of the Department share responsibility for security and safety. In particular, windows, including those in public rooms, should be closed at night.

Research students have access to a wide range of computing facilities within the Department. The Department has shared printing facilities (located in the common room), high speed Internet connections, and machines based on several platforms (most commonly Solaris, MacOS and Windows XP). Other facilities, such as a scanner and digital camera are also available.

Computing Support Group: csg@cs.stir.ac.uk

Photocopying

The photocopier is in the common room. Access is currently unrestricted.

Phones, faxes, post...

Work related mail should be placed in the basket in the Departmental Office (4B80). This is taken to the Mail Room twice daily. Stamped private mail may also be placed in this basket.

The official address of the Department is:

Department of Computing Science & Mathematics
University of Stirling
STIRLING
FK9 4LA

Incoming mail is delivered to the appropriate tray in 4B80.

The Departmental Office phone numbers are 01786 467421 (*Grace McArthur*), 01786 46 7421 (*Linda Bradley*) 01786 46 7436 and 01786 46 7420 (*Kerstin Rosee*); the fax number is 01786 464551.

<http://www.cs.stir.ac.uk/intro/whoiswho.html>

Electronic mail is the main form of internal communication within the Department and the University.

Internships

The Department recognises that a suspension of the course of study may be desirable to allow a PhD student to take up an exceptionally valuable opportunity for an internship at a well-established company. However, a strong case for the suspension should be made well in advance by the PhD student together with the supervisor. The application should be directed in the first instance to the Research Committee. If the application is accepted, the case can be made to the University who will take the *final* decision. Matters that need to be handled by the University should be brought forward in plenty of time to be considered properly (normally at least 2 months). It should be noted that approval is by no means automatic, and an application should therefore be made well in advance of the proposed period of suspension.

The expectation is that the student's work at the company will not simply be work done on the PhD at a different location as, if this is the case, then the relevant procedures are laid down in the University's regulations. In that case, the period and nature of the research work are unchanged, and the student is still expected to finish the PhD studies in the three year period.

In addition, it is assumed that such internships will be the exception rather than the rule. For example, the Department and University would not normally expect students to suspend their studies more than once in three years. Moreover, internship applications coinciding with the expected end date of the PhD will be rejected. Indeed, in general, we wish PhD students to finish their research within the three-year time frame mandated by the regulations, and suspension of studies is not intended as a means whereby students may artificially extend their programme of research.

Applicants should not leave the Department before receiving a written approval of their internship request.

Travel

Attendance at conferences and workshops is a vital part of a PhD programme as researchers must be aware of others' work, be able to present their own work to a large audience, and be able to discuss their work on an individual level with other researchers. Unfortunately, finding the funding can be

tricky. However, there are various sources of funding for travel to conferences: funding bodies, external bodies, grant holders and Departmental travel budget. In addition to these it is often possible to work at a conference as a student volunteer to reduce the cost.

Some funding bodies provide travel funds. Details of these vary greatly from body to body but the convenor of RC will have some information, and your funding body will be able to give you full details. Students funded as part of a project may also have an allocation of travel money provided with the grant – the grant holder will know the details of any allocation.

There are often external sources of funding available for travel. Again, the RC convenor can give guidance on general schemes. Many conferences and workshops organise some form of sponsorship – this is especially true of student-oriented workshops and summer schools. The conference organisers will give guidance on applying for travel support.

Finally, as a last resort, the Departmental travel budget can be used to support research student travel. After consultation with their supervisor, students should apply to the appropriate member of RC for travel funding to attend a conference/workshop when other funding sources have failed. You should make a short statement justifying the travel, an indication of the costs and a statement of what other routes have been tried to fund the travel. The Departmental budget is only open to those paying full-time or part-time fees; it is not normally available to those paying registration only fees.

Evan Magill (RC Travel)

REPORTS AND MILESTONES

Research in any situation is subject to time, financial and other constraints. Doing a degree by research is no different (in some respects the constraints are much tighter, in other respects they are very loose). Learning to work within these constraints is as much a part of the training process as learning the basic skills of research. To monitor progress, annual reports are required for every student. This section highlights what is required in each of these submissions in addition to the final thesis submission. The annual reports, though not ends in themselves, are important, for they provide one of the main means whereby the student's progress and research potential can be judged. However, preparation of the reports should not divert the student for long periods of time from the longer-term programme of work. Rather, they should emerge naturally as a product of each year's study, summarising what has been done and looking forward to the work ahead. Typically the main technical sections already exist as papers, and the report itself is simply a summary of progress.

The annual review procedures requires two documents; an *Annual Report* which is written by the student, and the *RC Viva Record* which is completed by the viva panel after each annual report is examined, and essentially is a record of the meeting with recommendations for progress.

In addition in the first year there is an additional milestone. Ten months into full-time study, registration for PhD is officially confirmed. This requires a form signed by the HoD. As the first annual report to the department occurs after 9 months, it is recommended that that the university form is started at the same time.

Evan Magill (RC Progress)

Three month plan of work

This initial report is to ensure that everything has started smoothly and that the student knows what to do in the first year.

Content

The plan of work should contain statements on the following:

- details of the supervisory team
- the topic of research to be investigated in the first year, and details of the mini-project to be undertaken (see below)
- a timetable for the research
- research groups to participate in
- any courses to attend.

The report should be no longer than 4 pages.

Submission

The plan of work is due within 3 months of a student arriving in the Department (the end of December if you started in October) and, after review by the supervisors, should be submitted to the convenor of RC for inclusion in the student's file.

First year mini-project

During the first year each student should normally undertake a “warm-up” mini-project. The exact nature of this will depend on the research topic and will be discussed by the student and supervisor. The aim is to develop some of the skills needed for the rest of the PhD, test out some initial ideas, and assess the student's aptitude for research. A report on the mini-project must be included in the first year report.

The nature of the mini-project will vary depending on the area of research. For a very practical topic this might be a piece of implementation work (perhaps after learning a new language), necessary to test out ideas in the future. For an experimental area it might be designing and running an experimental study to learn the basic techniques required. For a theoretical topic it might be a comparison of different approaches, etc. The idea is to make sure that you gain a range of skills that you will need to complete your research. This fits well alongside the reading that you will do as a first year student to learn about your chosen area of research, and makes the first year a good mixture of practice and theory. Moreover, should you decide not to continue to a PhD, the mini-project should be suitable as a basis for an MPhil thesis.

If the mini-project work is done well it might provide a publication at a conference or workshop in your second year. It will also confirm whether your initial ideas are likely to be successful and therefore continued, or a new approach be taken. This is important, as the first year report requires a plan for research in the second year, so you must have a good idea of what you are going to do and the mini-project helps provide this.

Annual Student Mini-conference

Each year in the break between semesters (late January, early February) a day of research student talks is held. Each student contributes a short talk on the day (first year students typically 15 minutes, others 20-30 minutes) and attends the talks of others. All staff are invited to the talks.

Annual Progress Reports (first, second and third year)

Written by each student, the Annual Reports form the main basis of ensuring progression is satisfactory, and also gives students practice in writing documents in the style expected of a thesis and in presenting and defending their work orally. It is expected that students will consult closely with their supervisor while preparing these reports.

Contents of the first year report and viva

The aim of this report is to assess how the student is progressing and to enable any problems to be corrected while they are still relatively minor. Three main aspects of the student's work will be examined:

Is there an understanding of the other major work taking place in the area?

Does the student have the ability and potential to make an appropriate contribution to the area of research?

Can the student present their work well and communicate with others?

The precise nature of the annual reports is likely to depend on the chosen area of study. For example, a student working on a theoretical topic may produce rather a different style of document from one whose work is heavily oriented towards the practical. Nonetheless, the first annual report should normally contain the following:

- *a survey of the field* in which the student is working, showing that a thorough study of the relevant literature has been made, and that the significance of particular pieces of work has been understood in the wider context of the subject area;
- *a report on the mini-project* work done during the year;
- *a clear thesis statement*, with a discussion of the significance of that topic and how it fits into the broader context of the subject area; this may include a description of any preliminary results obtained.
- *an outline research plan*, indicating goals that have been identified as necessary for the completion of the research; where possible, some assessment of how these goals can be achieved, of the likely time-scale involved, and of any resources that may be needed in the course of pursuing this programme.

It is worth reiterating that the annual report should emerge naturally from the year's study, and not be a major end in itself, nor a burden detracting from the main programme of work. For example, the first two items above are likely to have been written up during the year as reports or papers, and can be included in that form as appendices.

The viva will take place with the viva panel (normally the supervisors and one other member of staff) and the student after the report has been submitted. It will last 1- 2 hours, with the student giving a short presentation on the work, followed by a discussion of the work (see viva/oral below).

The second year report and viva

This should contain:

A review of the research proposal made one year earlier, and details of progress made and problems encountered during the period. Of course, by this stage a fairly detailed picture of the final thesis should be emerging; indeed it might be expected that students will have made sufficient progress *to be in a position* to write around half of the material

of the eventual thesis. While we not want a thesis style report this information should appear in the second year report in a more succinct form. Many students will be in a position to submit one or more completed papers, in the form of technical reports and/or submitted articles, as the major part of this component of the report.

A concise thesis statement. This will have developed since the first year report was written.

A detailed plan of the remaining work that is to be undertaken in order to complete the research. Where possible, targets should be set for identifiable tasks within the framework of an overall schedule. It is recognised, of course, that it may be more or less difficult to engage in this kind of planning exercise depending on the nature of the research. Whereas it may be feasible to set aside one month to, say, carry out a particular experiment, one can hardly allocate a fixed period of time to prove a theoretical result.

A draft plan for the thesis content.

The third year report and viva

This is only necessary if the student has not completed the thesis. If all has gone to plan then the third annual report should *be* the thesis! If the report is required it should include a major amount of the work to appear in the final thesis. This report should contain:

A review of the plan laid out in year two, and details of progress made and problems encountered during the period. Any papers or other publications produced should be included with the report.

A detailed plan of the work remaining and a detailed timetable to achieve this.

A proposed table of contents for the thesis.

Completed thesis chapters as an appendix.

Format of Reports

The quality of presentation should be that normally expected of a thesis or academic paper; indeed, significant parts of the report may eventually find their way into the final thesis or separate publications. The report should be prepared using an appropriate document preparation system (e.g. LaTeX, Microsoft Word, etc.), and should contain a properly organised and referenced bibliography.

Submission of Reports

Initially the student should submit the report to Grace McArthur. The report will then be distributed to the student's viva panel. An oral examination, or *viva*, will then be arranged in which the student will defend the report (see below). Finally, the viva panel will complete a record on the progress of the student and submit this, with a copy of the Annual Report, to the convenor of RC. The deadlines given below are for this final submission to RC; it is the student's and supervisor's joint responsibility to ensure these deadlines are met. Earlier submission dates for the report and viva date should be set in order to meet these deadlines.

For full time students:

- **Annual Report for first year students should be submitted to RC no later than 9 months into the programme – for students starting in October this equates to the end of June of the 1st year.**

- **Annual Report for second year students should be submitted to RC no later than 21 months into the programme – for students starting in October this equates to the end of June of the 2nd year.**
- **Annual Report for third year students, if necessary, should be submitted to RC no later than 33 months into the programme – for students starting in October this equates to the end of June of the 3rd year.**

For part-time students the timetable is more flexible but we would normally expect the following deadlines:

- **First Annual Report to RC no later than 15 months into the programme.**
- **Second Annual Report to RC no later than 33 months into the programme.**
- **Third Annual Report, if necessary, to RC no later than 51 months into the programme.**

Progress Audit

Confirmation of registration for PhD is made 10 months after initial registration, i.e. after the first annual viva, making this a crucial milestone.

Viva/oral

The student's Annual Report will be read by their viva committee which consists of the supervisory team and one other member of staff. At the viva, the student is required to give a short presentation, which will be followed by a longer questioning session. The viva will be chaired by someone other than the first supervisor (the first supervisor minutes the meeting). After discussion, the student will be asked to withdraw while the committee discusses the examination and completes the necessary paperwork (which the student can see and discuss with the first supervisor at a later date). The results of the viva together with a copy of the annual report itself should be submitted to the convenor of the RC to be included in the student's Department file.

Possible outcomes

In the best case, the annual report is well received by the viva panel, and satisfactory progress is confirmed. If the report is not satisfactory the student may be asked to rewrite the report and undergo a second examination within 3 months of the first viva. In some cases a recommendation may be made to complete an MPhil rather than a PhD, or even terminate studies. Such recommendations will be clearly stated in the Viva Record and shown to the student. In all cases, Viva Records should still be submitted to RC immediately after each viva.

For third year students, if all is well, the student's plan for submission and the process of completion should be agreed and no further action will be required at this stage. If the timetable does not show that the student will have started to write the thesis by the end of the normal funded three year period the viva panel should make itself sure that the student will be able to complete in time. One option the viva panel has (as previously) is to recommend that the student submit for an MPhil forthwith, although this would be regarded as an exceptional and undesirable outcome at such a late stage.

COMPLETION

The details below are for guidance only – the official regulations concerning thesis submission are contained on p25 to p27 in the University document <http://www.research.stir.ac.uk/postgraduate-information/handbook/documents/PGRHandbook.pdf>. The remainder of this section covers: intention to submit, writing up status for those requiring some additional time, the thesis content, the thesis examination or viva, and finally graduation.

Notification of intention to submit

On the build up to completion, every student must submit a notification of thesis title form, available from the Student Services office. This form starts the official process of convening an examination panel and appointing an external examiner. The final examination, or viva, cannot take place until these are in place. Students must submit the form at least 4 months prior to the expected date of submission.

Registration only status

Students who wish to continue working on their thesis in the Department after the end of their third year automatically move to *registration only* status. For part time students this happens after 6 years. The fee for registration only is currently set at £83.

It should be pointed out that registration only status does not actually confer any right to remain in the Department, but only permits the use of central resources (e.g. the University Library). However, as recommended by EPSRC, the Department does not adopt an abrupt cut-off policy as it recognises that continued access to its writing-up facilities (and computational resources to run down loose ends) will aid the student in achieving a result. Writing-up students are accommodated as nearly as possible to the same standard as fully funded students but no guarantee of this is offered – should there be a resource famine this will become significant. At the same time EPSRC requires that the students they fund should normally complete within four years and will seek a report from the student through the supervisor if no result is forthcoming after four years. EPSRC also monitors completion rates and penalises Departments that fail to meet pass criteria by reducing their Doctoral Training Grant.

Leaving your studies

Sometimes things do not work out, and students feel the need to stop and leave their studies. It is important that you talk to your supervisor about this. Feel free to speak to the RC convenor too, or any other member of staff. For example, it may be possible for you to write up what you have done for an MPhil and we can advise on that. It is important that you do not just leave and not tell anyone because we have to inform funding bodies and the University. There could be serious implications for funding, e.g. you may have to repay part of your studentship. If you are going to leave then you need to write a short letter to the RC giving details of:

- your reasons for leaving
- where you are going (job, other research, etc.)
- new contact details

Make sure you also hand your keys back at the Departmental Office, return all portable computing equipment such as laptops, and close your library account.

The Thesis

Content

The content of the thesis should be agreed between student and supervisor. The content will, of course, vary considerably from student to student. The main body of the thesis normally contains introductory material, including a significant review of related work, followed by chapters giving in-depth coverage of different aspects of the work and finally a discussion of conclusions drawn from the work.

The format is specified in the University regulations. Within these regulations we recommend that all theses be printed on high quality laser printers, that margins of 15mm (40mm at binding margin) should be used, double line spacing and a serif font (e.g. Times) of point size 10 should be used for normal text. We strongly recommend that initial submission be in a temporary binding and a fresh printout made for final submission (post-viva).

Submission

Students must submit their thesis within 12 months of the end of their period as a “supervised student” and cannot submit before the end of the minimum study periods (see *Standard Time scales*). Submission involves handing two copies of the thesis to Registry (2Z, Cottrell).

Viva

After submission, the thesis is distributed to members of the examining committee who are then convened for a formal viva with the student. The examining committee / viva panel is usually composed of:

- an internal examiner who has not normally been involved in a supervisory role with the student;
- an external examiner (i.e. an academic from outside Stirling University) who chairs the viva;
- the student’s first supervisor (who is present only in an advisory role and may not speak unless requested).

Vivas typically last from 2 to 4 hours and are conducted within the Department. Students are often expected to give a short presentation of their work. This is at the discretion of the viva chair, but will normally be between 15 and 30 minutes duration. This will be followed by a longer discussion period.

Possible outcomes

There are six possible outcomes to the viva, with the most common being outcome **2**.

1. Award PhD.
2. Award subject to minor changes.
3. Full resubmission normally with second viva.
4. Award MPhil.
5. Award MPhil subject to minor changes.
6. No award.

Graduation

All students of Stirling University are required to graduate in order to receive their degrees. You must register for graduation in advance – for deadlines and details of the process students should consult the Registrar's office. Graduations normally take place in November and June in the Albert Halls or Gannochy Tennis Centre. PhD Graduates are given high profile in the ceremony. If, for whatever reason, a student cannot attend the graduation ceremony he/she can enrol to *graduate in absentia* – but must still graduate in order to be officially awarded the qualification.

Main deadlines

STUDENT CHECKLIST	WHAT'S HAPPENING	WHEN	SUPERVISOR CHECKLIST
<input type="checkbox"/>	Plan of work submitted to RC	start + 3 months (all students)	<input type="checkbox"/>
<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	Student Mini-conference	end of January every year (all students)	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>
<input type="checkbox"/>	First Annual Report to RC → viva	start + 9 months (full-time) start + 15 months (part-time)	<input type="checkbox"/>
	Viva Record - First Report	start + 9 months (full-time) start + 15 months (part-time)	<input type="checkbox"/>
<input type="checkbox"/>	Confirmation of PhD registration	start + 10 months	<input type="checkbox"/>
<input type="checkbox"/>	Second Annual Report to RC → viva	start + 21 months (full-time) start + 33 months (part-time)	<input type="checkbox"/>
	Viva Record - Second Report	start + 21 months (full-time) start + 33 months (part-time)	<input type="checkbox"/>
<input type="checkbox"/>	Third Annual Report to RC → viva (<i>not normally necessary</i>)	start + 33 months (full-time) start + 51 months (part-time)	<input type="checkbox"/>
	Viva Record -Third Report (<i>not normally necessary</i>)	start + 33 months (full-time) start + 51 months (part-time)	<input type="checkbox"/>
<input type="checkbox"/>	Intention to submit form	4 months before thesis submission	
<input type="checkbox"/>	Thesis submission	Not earlier than: 4 months after intention to submit Not later than: 12 months after supervised status ends	
<input type="checkbox"/>	Final viva		<input type="checkbox"/>

Supervisory meetings:

first supervisor – normally weekly;

second supervisor - at least once per semester and once over the summer.