

University of  
**Kent**

**POSTGRADUATE RESEARCH  
STUDENT HANDBOOK  
2008/09**

**FACULTY OF SCIENCE, TECHNOLOGY & MEDICAL STUDIES**





# POSTGRADUATE RESEARCH STUDENT HANDBOOK

## 2008/09

### Introduction

I am delighted to welcome you to the Computing Laboratory for your next period of study, and it is my hope that you'll have a happy - and productive - few years here. We are very proud of our graduate students, and value the contribution you bring to the academic life of the Laboratory, both intellectually and socially.

Our work is underpinned by national and international recognition for our research and strong links with industry. Our research activity is wide ranging and takes place within focused research groups that provide a supportive research community for all members, staff or student. We offer excellent research facilities and there are approximately 27 research staff currently engaged in research.

In terms of the structures of postgraduate study and the regulations that govern it this handbook should help guide you through the complexities. But postgraduate study is about more than structure and regulation. There are many opportunities for you at Kent and in the Laboratory, from developing your research within a vibrant research community, to attending workshops to help you develop skills, to volunteering to work with our outreach activities, such as the Café Scientifique or the First Lego League. I hope that you will thoroughly explore these opportunities, take advantage of all that is on offer, and maximise the benefit of your time here.

Welcome!

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The information contained in this handbook was correct at the time of going to print. The University, however, reserves the right to modify or cancel any statement in this Handbook at any time without prior notice.

# 1 Aims and Objectives

Research work in computing science covers an extremely broad spectrum. The general criterion of 'an original contribution to knowledge or understanding' can be interpreted in a number of contexts.

- n In a mathematical context, such as programming language semantics, the criteria would be to formulate definitions and to prove results about those definitions, and derive counterexamples to conjectured properties.
- n In an engineering context, the aim is to build a system to solve a particular problem. Here a solution technique should be original, but it is equally important that the artefact produced is evaluated in a rigorous way, and that its requirements are elicited using appropriate techniques.
- n In a scientific context, it is appropriate that any experiments undertaken -- either on systems or human participants -- are designed using appropriate methodologies. Moreover, the account of the work should reflect upon the design of the experimental work, in its particular context.

Any particular thesis may combine these approaches, and indeed also draw on other disciplines, such as sociology and psychology, for its standards.

In undertaking this the student is expected to be able to demonstrate:

1. The ability to recognise and validate problems;
2. Original, independent and critical thinking, and the ability to develop theoretical concepts;
3. A knowledge of recent advances within one's field and in related areas;
4. An understanding of relevant research methodologies and techniques and their appropriate application within one's research field;
5. The ability to critically analyse and evaluate one's findings and those of others;
6. An ability to summarise, document, report and reflect on progress.

From the MSc and PhD regulations for the University of Kent ...

In order to be eligible for the award of the degree of Master of Science by research and thesis a candidate is required to show in the thesis ability to conduct an independent study and to understand its relationship to a wider field of knowledge. The candidate is also required to show appropriate ability in the organisation and presentation of the material in the thesis.

The [PhD] thesis should be an original contribution to knowledge or understanding in the field under investigation and should demonstrate the candidate's ability to test ideas, whether his/her own or those of others, and to understand the relationship of the theme of the investigation to a wider field of knowledge. It should be of such scholarly merit as would on that ground justify its publication either as submitted or in an abridged form. The candidate is also required to show appropriate ability in the organisation and presentation of his/her material in the thesis.

Each programme of study offered by the University has an approved Programme Specification. The specification for research degree programmes is available at:

<http://www.kent.ac.uk/stms/studying/programmes/2008-2009/computing/postgraduate.html>

## 2 Research Environment and Training

### 2.1 Environment

The Computing Laboratory is a broad-based research centre that has engaged in postgraduate research training since the 1970s. In research assessment exercises the department has consistently achieved a grading of four, denoting evidence of international/national recognition.

The research groups form the focus for research work in the department. Each research active member of staff is a member of at least one group, but many staff participate in the work of more than one group, and inter-group work is encouraged. Every research student will join the research group of their supervisor(s). Each research group organises its own seminar series with internal and external speakers,

and other *ad hoc* groups (functional programming, concurrency) also meet on a regular basis.

Details of Courses, Conferences and Workshops, Seminars and Research Events may be found at:

<http://www.cs.kent.ac.uk/events/index.local>

Support for all full time registered research students includes annual funding to spend on academic conference travel, as well as a PC or laptop on their own desk in a research office. Research students have free access to university facilities such as printing, photocopying, a well provisioned Library and high bandwidth internet links. Their research is performed within well integrated, active research groups which have internal seminars and activities. Students are guided by one to one supervision and have further structured input and advice from a panel of academics. Research students attend teaching development and research issues courses in their first year and, if they wish, can gain professionally and financially by teaching on undergraduate programmes.

## 2.2 Research Training

In your first year of registration you follow a training programme. The programme has three components:

- n A weekly **postgraduate workshop**, with as learning outcomes that, at the end of the programme, a student should:
  - Appreciate the difficulties that can arise during a research degree and how to overcome them
  - Be able confidently to present research material to peers
  - Be aware of various techniques that can help support research
  - Be aware of the wider research picture in the Computing Laboratory and how that relates to their own work.
- n The workshop also includes a sub-programme on **teacher training**, based on the series of books *Learning to Teach* by David and Carole Baume, published by the Oxford Centre for Staff and Learning Development, Oxford Brookes University.

Some research students undertake undergraduate teaching in the department.

Elements of Level M module CO885 Project Research. This 15 credit module is delivered to students on the Advanced MSc in Distributed Systems and Networks in the Spring Term of each academic year.

In your first year of registration you are also given the opportunity to participate in an outdoor activities course, which promotes a team ethos in a cohort of students.

Student attendance and participation in research training is monitored by a register at each session.

In the second year students make a poster presentation of their work. Assessment criteria are published and feedback is provided to the student. The presentation can feed into the “Prestigious Paper Award” scheme which is run by the department.

Final year students receive a talk from the university Career’s Advisory Service. Topics covered include:

- n Introduction to the Careers Advisory Service facilities
- n How employers view computing postgraduates - the present state of the IT job market
- n What jobs are open to Computing postgraduates.
- n How and when to apply
- n Postgraduate CVs

## 2.3 Researcher Skills Training

Postgraduate research student training is based on the Joint Councils Skills Statement<sup>1</sup>

Training in areas of Sections A and B of the statement is covered in the Department. Students are encouraged to take advantage of the comprehensive programme of skills training provided by the Faculty and covering all year of study,<sup>2</sup> This training covers areas C to G of the Joint Councils Skills Statement. At each progress monitoring point students are encouraged to undertake a development needs analysis (skills audit) (Appendix 2). This audit is about setting targets for the level of competence expected of an experienced PhD student, to inform development needs. A development needs analysis:

- allows students to identify strengths – everyone is different, and comes to doctoral education with different backgrounds and experiences.
- Allows students to prioritise areas it is important to work on early – no one can work on all 36 skills at once.
- Allows students to plan training needs.

Guidance on how to undertake a skills audit will be discussed at the induction day and provided at progress monitoring points.

## 3 Student Support and Guidance

### 3.1 Academic Support

#### 3.1.1 Supervisor

The principal source of support is the academic supervisor, a member of staff. Occasionally, when a research topic reaches across research interests there is more than one supervisor. A student meets with their supervisor on a regular basis, for instance once a week.

#### 3.1.2 Director of Graduate Studies/Deputy Director of Graduate Studies

The Director of Graduate Studies meets regularly with the student body as a whole. This allows open discussion, as well as a formal mechanism for matters such as the election of student representation.

The Deputy Director of Graduate Studies is available to provide a route whereby students might raise concerns in a more informal forum or to avoid conflict of interest cases where, for example, Director of Graduate Studies' own student has an issue to be resolved.

#### 3.1.3 Supervision Panels

Each student is allocated a supervision panel that consists of their supervisor or supervisors together with two members of academic staff. The head of the student's research group will usually be one member of the panel. The other member of the panel need not be a member of the research group; in the case of research which straddles two groups, the second member should be a member of the second research group.

The terms of reference of the panel are:

- i. To monitor the academic progress of the student.
- ii. To provide academic advice to the student.
- iii. To provide advice to the supervisor, particularly in the case of a less-experienced supervisor.

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<sup>1</sup> See [http://www.kent.ac.uk/stms/skills/key\\_skills.html](http://www.kent.ac.uk/stms/skills/key_skills.html)

<sup>2</sup> See Faculty Postgraduate Skills Training web pages at: <http://www.kent.ac.uk/stms/skills/index.html>

- iv. To advise the Director of Graduate Studies in the case of the breakdown of the relationship between the student and supervisor(s).
- v. To report to the Graduate Studies Committee on the student's progress; in the case that progress is unsatisfactory the panel should suggest to the Committee measures to be taken to rectify the situation.
- vi. To examine the students mini-thesis (and to report as in item v. above).

Panel members will not usually be involved in day-to-day supervision of the student and may therefore become the internal examiner for the student's thesis. The panel should notify the Director of Graduate Studies in any case where a conflict of interest might be thought to arise.

In the case that a student's sole supervisor leaves the university it is expected that one of the panel members would become the student's supervisor; if this does not happen, the panel would advise the Director of Graduate Studies on a choice of replacement supervisor. In the case of joint supervision, the remaining supervisor(s) would retain the supervisory role.

## 3.2 Administrative Support

### 3.2.1 Course Administration Office

The Office can assist you with matters of an administrative nature relating to your registration. The office is located in Room S132 and the office personnel are as follows:

Administrator: Sandra Shine

Assistants: Rosemary Higham  
Lisa Powis  
Sonnary Var

Email: [computer-science@kent.ac.uk](mailto:computer-science@kent.ac.uk)

Telephone extension: 4227

Opening hours: Monday – Friday 10:00– 12:30, 14:00 – 16:00

### 3.2.2 Research Support Administrator

Research Support Administrator: Carol Moran

Email: C.A.Moran@kent.ac.uk

Telephone extension: 7379

Location: S122

### 3.2.3 Financial Administrator

Financial Administrator: Angela Doe

Email: A.Doe@kent.ac.uk

Telephone extension: 7591

Location: Room S121

### 3.2.4 Systems Support

For all systems support queries contact [cs-syshelp@kent.ac.uk](mailto:cs-syshelp@kent.ac.uk).

See also <http://www.cs.kent.ac.uk/systems/>

### 3.2.5 Health and Safety

Departmental Safety Co-ordinator: Stefan Kahrs

Email: [S.M.Kahrs@kent.ac.uk](mailto:S.M.Kahrs@kent.ac.uk)

Display Screen Equipment Assessment: Jenny Oatley

Email: [I.A.Oatley@kent.ac.uk](mailto:I.A.Oatley@kent.ac.uk)  
 Electrical Safety Testing: Darren Lissenden  
 Email: [D.Lissenden@kent.ac.uk](mailto:D.Lissenden@kent.ac.uk)

### 3.2.6 Communication

Information in the department is disseminated by a variety of means, including a mailing list – [comp-postgrad@kent.ac.uk](mailto:comp-postgrad@kent.ac.uk) – to which each research student is subscribed.

## 3.3 Laboratory and Faculty Officers

Position	Name	Email
Head of Department	Professor Simon Thompson	<a href="mailto:S.J.Thompson@kent.ac.uk">S.J.Thompson@kent.ac.uk</a>
Head of Research	Dr Alex Freitas	<a href="mailto:A.A.Freitas@kent.ac.uk">A.A.Freitas@kent.ac.uk</a>
Director of Graduate Studies	Sally Fincher	<a href="mailto:S.A.Fincher@kent.ac.uk">S.A.Fincher@kent.ac.uk</a>
Student Training	Ursula Fuller Professor Peter Welch	<a href="mailto:U.D.Fuller@kent.ac.uk">U.D.Fuller@kent.ac.uk</a> <a href="mailto:P.H.Welch@kent.ac.uk">P.H.Welch@kent.ac.uk</a>
Dean of the Faculty	Professor Peter Jeffries	<a href="mailto:P.Jeffries@kent.ac.uk">P.Jeffries@kent.ac.uk</a>

## 4 Staff-Student Liaison

The department has a Staff-Student Liaison Committee as a forum for engaging students in the quality management and enhancement of their programmes of study. It provides an opportunity for staff members to consult with students on all aspects of their student learning experience and involve them in discussion with regard to future developments in the Department. The Committee meets twice in each academic year.

The Liaison Committee reports to the Departmental Graduate Studies Committee.

Two student representatives are members of the Departmental Graduate Studies Committee which is constituted thus:

- n Director of Graduate Studies (Chair)
- n Administrator (committee secretary)
- n Head of Department
- n Head of Research
- n Heads/Representatives of Research Groups
- n Postgraduate Admissions Officer (Research)
- n Research Support Administrator
- n Head of Systems Support
- n Two student representatives

The terms of reference of the committee are:

1. To consider admission, recruitment and funding of postgraduate research students in the Laboratory.
2. To monitor the progress of research students in the Laboratory.
3. To consider all training and QA issues for Postgraduate Research programmes and to make recommendations to the Computing Board of Studies and the Science, Technology and Medical Studies Faculty Research Committee as appropriate.

4. To consider and recommend to the Computing Board of Studies and the Faculty Research Committee proposals for new research degree programmes.
5. To act as a forum for discussion of staff/research student liaison issues.

The committee meets twice yearly, at the start of the Autumn Term and the end of the Spring Term. In its unreserved business it considers strategic aspects of item 1. (above) and all aspects of items 3., 4. and 5. Individual aspects of item 1. and all aspects of item 2. are considered under reserved business.

The committee reports on student admissions and student progress to the Faculty Research and Enterprise Committee on an annual basis in late September. The Chair and the Head of Research represent the department on the Faculty Committee.

## 5 Progress Monitoring

The Department has a series of formal progress monitoring points. These are presented in Appendix 1 to this handbook.

### 5.1 Induction Meeting

At the start of registration, students are issued with an Induction Form which must be completed in consultation with the supervisor and submitted to the Director of Graduate Studies within 3 weeks of the start of registration. This will form the basis for discussion at the first Supervision Panel meeting.

### 5.2 Supervision Panel Meetings

Supervision Panels meet with students 3 months after the start of their registration. Thereafter student progress is reviewed every nine months in a meeting with their supervision panel; reports from these meetings are

- n either a statement that progress is satisfactory
- n or that it is unsatisfactory. In this case the panel makes a recommendation about what corrective action needs to be taken; the panel members and the student sign this off.

Where there are issues of unsatisfactory progress the Graduate Studies Committee can require a supervision panel to meet more frequently with a student and to report on progress.

Every research student registered for a PhD or who wishes to upgrade their registration to that of PhD, is required to submit and be examined on a mini thesis before the end of their first year. An evaluation of this thesis forms the report for that reporting period.

Reports from supervision panels are considered by the Laboratory Graduate Studies Committee; unsatisfactory progress can result in the termination of a student's registration or the failure to re-register a student.

In the case of part-time students, or students whose time of registration was not at the start of the academic year, reports will be considered by the Director of Graduate Studies in consultation with the supervision panel.

The table in Appendix 1 sets out the schedule for progress monitoring.

### 5.3 Evaluation of supervisor performance

Research students are asked to comment on supervisors and supervisions. The information is collected using the same timescale as the supervisory panels, but is separate from that process. Information will be passed directly to the Director of Graduate Studies (or his/her Deputy if the student is supervised by the Director) who will liaise with the Head of Department concerning further action or advice to be taken.

## 6 Funding

### 6.1 Departmental Scholarships

Departmental Scholarships are administered by the Financial Administrator and by the Course Administration Office. Students in receipt of a Departmental Scholarship will be required to sign the Terms and Conditions of University studentships. Payment is made monthly and can be made direct to your bank account, although the first payment will be by cheque. Continuation of scholarships is subject to satisfactory academic progress.

### 6.2 Funding for Travel

The Department has agreed to set aside money to support postgraduate students travel to conferences and workshops. The guideline for each year is approximately £500<sup>3</sup> (GBP) pro rata per full-time equivalent research student. Applications for funding should be made using the on-line form at:

<http://www.cs.kent.ac.uk/research/travelform.local>

### 6.3 Hardship Fund

Each year the department has a limited budget to help in cases of research student hardship. Applications can be submitted for consideration at any time using the on-line form at:

<http://www.cs.kent.ac.uk/research/pg/hardship.local>

The request should include the level of support requested, which would not normally be more than £1,000, and a brief case for support (no more than 300 words) explaining how the hardship award would aid the studies of the applicant. The applicant may also be required to produce documentary evidence of financial hardship, such as bank statements.

Allocation of awards from the fund will be made by the Director of Graduate Studies and the Head of Department

## 7 Working in the Research Environment

### 7.1 Research Ethics (Human Participation)

The Faculty has a Research Ethics (Human Participation) Advisory Group whose purpose is to protect the dignity, rights, safety and well-being of all actual or potential research participants. All staff and students wishing to submit a research proposal involving human participation must follow the procedures set out in the Faculty Research Ethics Handbook which is available at:

<http://www.kent.ac.uk/stms/faculty-office/adminprocedures/research-ethics/index.html> R

Research students should consult their supervisor or the head of Research, Dr Alex Freitas if they require further advice or guidance in this.

### Recommendations from the Director of Graduate Studies:

#### 7.2 General

Estelle M. Phillips and D.S. Pugh *How to get a PhD : A handbook for Students and their Supervisors* Milton Keynes, Open U.P., 1987, repr. 1992

Two nice essays from Paul Edwards (in the “Reviews and Essays” section):

<http://www.si.umich.edu/~pne/>

n How to Give a Talk: Changing the Culture of Academic Public Speaking

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<sup>3</sup> Applications for support in excess of this amount will be considered.

## n How to Read a Book

Essential reading on the necessity for, and etiquette of, research networking:

*Networking on the Network: A Guide to Professional Skills for PhD Students* available from

<http://dlis.gseis.ucla.edu/people/pagre/network.html>

### 7.3 Information Organisation

Kenneth O. May *Bibliography and Research Manual of the History of Mathematics*. University of Toronto Press, 1973. (particularly pp 2-27)

Robert M. Pirsig *Lila: An Inquiry into Morals* Bantam Press, 1991 (particularly pp 22-29)

<http://infodome.sdsu.edu/research/guides/cite.shtml> is a compilation site, with references to many authoritative answers to the question “How do I cite electronic references?”

### 7.4 Bibliographic packages

EndNote & RefWorks

The library provide a support page for EndNote :

<http://library.kent.ac.uk/library/online/endnote/endnote.shtml>

And for an online equivalent :

<http://library.kent.ac.uk/library/online/refworks/refworks.shtml>

BibTeX:

<http://www.ecst.csuchico.edu/~jacobsd/bib/formats/bibtex.html>

### 7.5 The core literature repertoire

One of the things that established researchers have is a working knowledge of the relevant literature. Most established researchers have a core repertoire of some 100-150 works on which they can draw readily. These are a useful selection from the hundreds or thousands of articles and books the researcher has digested over time. The repertoire gives a researcher a context in which to place ideas: the collection characterises the major strands of thinking in the field, identifies the major researchers, and provides research models and examples. Of course the repertoire evolves and must be updated.

Part of doctoral study is acquiring one’s own core repertoire. The annotated bibliography is an effective mechanism for facilitating this acquisition – and for keeping record of the majority of papers that fall outside the core. The annotated bibliography is a powerful research tool. It should be a personal tool, keying into the way you think about and classify things.

#### 7.5.1 What the annotated bibliography should include

It should include, as a minimum:

- n the usual bibliographic information (i.e. everything you might need to cite the work and find it again)
- n the date when you read the work
- n notes on what *you* found interesting / seminal / infuriating / etc. about it. (The notes should not just be a copy of the abstract; they should reflect your own critical thinking about your reading. They can be informal, ungrammatical, even inflammatory – as long as they retain meaning about your reading. If you read a paper more than once and get different things from it, then add to the notes – but do keep the original notes, which can prove useful even if you’ve changed perspective or opinion.)

It can include many other useful things, e.g.:

- n where the physical copy of the work is (e.g. photocopied paper, book borrowed from the library, book in one’s own collection)
- n keywords, possibly different categories of keyword

- n further references to follow up
- n how you found the work (e.g. who recommended it, who cited it)
- n pointers to other work to which it relates
- n the author's abstract

### 7.5.2 The discipline

Keeping an annotated bibliography is a discipline. It is easiest to establish a discipline of writing notes about papers as soon as you read them, not going on to the next paper until you have done so. It is *much* harder to go back and try to catch up. Because keeping the bibliography is an 'overhead', and because the point is to maintain access to material, it is best to keep entries to under a page per paper.

### 7.5.3 Other ways it can help

- n The bibliography can help you to 'backtrack' on your own thinking.
- n It will reflect the evolution of your reading, of what you found important over time, and of your writing about what you read.
- n When you find a reference and cannot remember the paper's particular perspective, the notes can give you the key.
- n When you re-read a paper just before your viva and say: "Oh no, it doesn't say that at all, what could I have been thinking?" the notes will be invaluable.

The bibliography can help you to manage your reading effectively and keep accessible much more information than you can remember without aid.

- n Keeping a bibliography allows you to use a 'flat', unambiguous physical filing system (e.g. alphabetical by author) while being able to categorise, re-categorise, and search fluidly.
- n The bibliography can help you avoid re-reading papers that are useless and forgettable but have interesting titles.
- n It can help you keep track of the physical form and location of materials.

## 7.6 Writing Guides

Lyn Dupré *Bugs in Writing : A Guide to Debugging Your Prose* Addison-Wesley. Revised Edition, March 1998

Joseph M. Williams *Style: Ten Lessons in Clarity and Grace* Longman, 6<sup>th</sup> Edition, 1999

Justin Zobel *Writing for Computer Science* Springer, 2004

## 8 Assessment and Examination

Higher degree regulations are available on the University's web pages at

<http://www.kent.ac.uk/uelt/quality/regulations/research.html>

### 8.1 Mini-Thesis

Every research student registered for a PhD, or who wishes to upgrade their registration to that of PhD, is required to submit a mini-thesis.

Mini-theses are examined by members of your supervisory panel and you are required to produce a 'mini-thesis' of approximately 25 sides. Typically this will take the following form:

1. A brief review of the relevant research work in your field.
2. A description of your project, and how it aims to break new ground.
3. A description and evaluation of the work you have done so far.
4. An outline on the likely final form of your thesis: the main topics you expect to cover, and their

ordering. One way of doing this is to give your likely Chapter headings with a single paragraph summarising what each Chapter will say.

#### 5. A bibliography.

Typical lengths of the above parts might be 8-10 pages for 1 and 2 above, 13-15 pages for 3 and 4 and 2-3 pages for the bibliography; obviously this might vary in individual cases. Overall it is hoped that most of the material in the mini-thesis will be useful in the final thesis. You are expected to devote a maximum of one month to the preparation of the mini thesis.

As well as seeing your written submissions, the examiners might want to see demonstrations of any software you have written (though this should not be a main focus) and may also want to examine your bibliographic records. The examiners will make one of the following recommendations:

- n satisfactory; you can proceed with/be upgraded to the degree of PhD
- n not satisfactory, required to resubmit mini-thesis in six months
- n not satisfactory; downgrade to lower degree
- n not satisfactory; withdraw

For full-time students who commence their registration in September, the following deadlines apply:

- n Mini-thesis submission in July of year 1;
- n Examination in August of year 1;
- n The entire process to be completed before year 2 registration date.

## 8.2 Upgrading from MSc (by research) to PhD

Any MSc research student who wishes to upgrade their registration to that of PhD is required to submit a mini-thesis and follow the same procedures as described in the section above.

## 8.3 Annual Registration

All research students are required to re-register on the anniversary of their original registration date. This process is on-line and students who fail to do this risk losing their login and will receive a fine. Students will be notified when this procedure must be followed.

## 8.4 Submission and Examination of Thesis

You are encouraged to submit your thesis for examination by the end of your period of registration, however, the regulations do not permit a candidate to present a thesis for examination earlier than three months before the end of the period of registration. At the beginning of your final year the Course Administration Office will send you details of the process for submission.

### 8.4.1 Notice of Submission

You should notify the Course Administration Office of the likely date of submission of your thesis by completing a notice of submission form. This should be completed and returned to the Course Administration Office at least two months before you intend to submit your thesis, in order that arrangements for the formal appointment of examiners may be put in hand.

### 8.4.2 Presentation of a Thesis

Instructions to candidates on the presentation of a thesis are available on the University's web pages at:

<http://www.kent.ac.uk/uelt/quality/regulations/research.html>

Our style file is found at:

`/usr/local/share/texmf-local/tx/latex/ukcthis.sty`

### 8.4.3 Extension Year

All students registered for Higher Degrees who will not have submitted their thesis by the end of their period of registration must seek approval from the Director of Graduate Studies in order to enter the extension year. The extension year is the twelve month period commencing on the date that the formal registration (either full-time or part-time) ends. Only those candidates who are deemed to have completed their research and have made requisite progress in the production of their thesis, so that submission is expected within the twelve months, will be permitted to enter the extension year. Those candidates who have not completed their research and who are deemed to require full supervision may be required to continue their period of registration for a further defined period. Such candidates will be required to register and pay tuition fees for this period.

During the extension year candidates are entitled to limited supervision, specifically to comment on draft material for their thesis. They are also entitled to departmental and University library and general computing facilities but not to laboratory facilities such as specific computing facilities directly related to their research.

The fee for the extension year will be based on a monthly charge, payable upon submission. At 2008/2009 rates the monthly charges for candidates who submit a thesis within the extension year would be as follows: £25 per month for the first three months increasing monthly thereafter. The maximum charge payable for submission within the 12 month period will be 25% of the part-time non-laboratory fee (at 2008/2009 rates this would be a maximum of £450).

Candidates who do not submit a thesis within the extension year may be allowed, subject to approval by the Director of Graduate Studies, to enter a further extension year. Such candidates would be liable for fees amounting to 50% of the part-time non-laboratory fee (£900 at 2008/2009 rates) in respect of the first extension year and 50% of the part-time tuition fee in effect for the second extension year.

The Director of Graduate Studies will consider whether or not you should be permitted to enter the extension year based upon a statement of the work you have completed to date, a timetable for completion of the thesis and reports on your progress submitted by your supervisor and one other member of staff.

### 8.4.4 Examination

Each candidate will be examined by two or more examiners of whom at least one shall be an external examiner. A candidate's supervisor will not normally be appointed as an internal examiner. Candidates registered for the degree of PhD will be required to attend for an oral examination with the appointed examiners. Candidates registered for the degree of MSc by research may be required to attend an oral examination if the examiners require it.

After examining the thesis presented by a candidate and considering the results of any oral or written examination which they have conducted the examiners, at their discretion, may recommend to the Board of the Faculty:

1. that the degree for which the candidate is registered be awarded;
2. that the degree be awarded subject to certain minor corrections being carried out to the satisfaction of the internal examiner within three months of the official notification to the candidate of the recommendation of the examiners;
3. that the degree be not awarded at present but that the candidate be permitted to resubmit the thesis in a revised form not later (except in cases of illness or other good cause) than twelve months after the decision to allow resubmission has been made by the Board of the Faculty. If at least one of the examiners so wishes, he/she may require the candidate to undergo an oral or a written examination or both;
4. that the degree be not awarded at present but that the candidate be permitted to take a further oral or written examination or both normally not later than six months after the decision to allow this has been made by the Board of the Faculty;

*Note: This recommendation may only be made in cases where the candidate submits a thesis judged satisfactory by the examiners but fails to satisfy the examiners in the oral or written examination or both.*

5. [in the case of PhD candidates] that the degree of PhD be not awarded but that the candidate be permitted formally to resubmit the thesis without alteration and without further scrutiny for

the award of the degree of Master of Philosophy;

6. [in the case of PhD candidates] that the degree of PhD be not awarded but that the candidate be permitted to resubmit the thesis for the award of the degree of Master of Philosophy subject to certain minor corrections being carried out to the satisfaction of the internal examiner within three months of the official notification to the candidate of the recommendation of the examiners;
7. that no degree be awarded.

## 8.5 Deletion of Computer Files

For the most up to date information about deletion of computer files, please see the Computing Service website at <http://www.kent.ac.uk/is/computing/>.

## 8.6 Repository of PhD Theses

The Computer Science website hosts a repository of PhD theses from our former students. You are required to submit a final, electronic, copy of your thesis for inclusion.

# 9 Academic Integrity and Honesty at University

General Regulation V.3: Academic Discipline states that:

Students are required to act with honesty and integrity in fulfilling requirements in relation to assessment of their academic progress.

The full details of this regulation including disciplinary procedures and penalties are available at:

<http://www.kent.ac.uk/regulations/general.html>

### What is academic integrity?

While you are at university, you are expected and required to act honestly regarding the work you submit for assessment in your courses.

General Regulation V.3 specifies that any attempts to:

- cheat,
- plagiarise,
- improperly influence your lecturer's view of your grades,
- copy other assignments (your own or somebody else's) or
- falsify research data

will be viewed as a breach of this regulation.

Most students do not have any problems understanding the rules and expectations about acting honestly at university, although some are not familiar with academic expectations and *plagiarism*.

### What is plagiarism?

General Regulation V.3 states that plagiarism includes:

reproducing in any work submitted for assessment or review (for example, examination answers, essays, project reports, dissertations or theses) any material derived from work authored by another without clearly acknowledging the source.

In addition, certain departments or subjects may define plagiarism more narrowly.

This means that if you read, study or use any other work in your assignment, you must clearly show who wrote the original work. This is called referencing and correct referencing will help you to avoid accusations of plagiarism.

### What is referencing?

Referencing means acknowledging the original author/source of the material in your text and your reference list. Examples of source material which should be referenced include:

- exact words (written or spoken)
- summarised or paraphrased text
- data
- images (graph, tables, video, multimedia etc)
- pictures or illustrations
- ideas or concepts
- theories
- opinion or analysis
- music or other performance media
- computer code
- designs, drawings or plans.

A variety of referencing styles are in use at the University of Kent. Specific style guides can be accessed from your department, library or UELT website.

Good referencing and avoiding plagiarism are pre-requisites to good writing. If you are unsure about essay writing in general or want to make sure that you will receive the good marks you deserve, you can visit the Student Learning Advisory Service based in the UELT building. For details see: <http://www.kent.ac.uk/uelt/learning/index.html>

### **Departmental Guidance**

The Department has published a Frequently Asked Questions guide on Plagiarism and Collaboration and this is available at:

<http://www.cs.kent.ac.uk/teaching/student/assessment/plagiarism.local>

## **10 Absence, Intermission or Withdrawal, Concessions**

### **10.1 Absence**

Permission to be absent from the University for the purpose of research for periods of greater than three weeks is subject to approval by the Faculty Director of Research Studies who will need to be satisfied that the appropriate facilities are available and arrangements for supervision are satisfactory.

### **10.2 Intermission**

Under certain circumstances you may be allowed to suspend your University registration (i.e. to intermit). Intermission is normally only granted for a period of three months and on medical grounds, or circumstances of grave and exceptional misfortune.

### **10.3 Withdrawal**

If you wish to withdraw from the University you should discuss this with your supervisor in the first instance and with the Director of Graduate Studies.

Notes:

1. Students must confirm in writing any request for intermission or decision to withdraw.
2. Intermissions or withdrawals will take effect from the date that written notification is received by the Course Administration Office. Intermissions or withdrawals cannot be backdated.
3. If you are in receipt of a bursary you may be required to repay a proportion of this if you intermit or withdraw.

### **10.4 Concessions**

If at any time during your registration you are ill or affected by other circumstances which mean that you are unable to continue with your studies you should notify your supervisor or the Director of Graduate Studies. It may be that your registration will need to be suspended until such time as you are fit to continue. It is important that any such action is taken at the time you are affected. Do not leave this until the end of your registration as such action cannot be backdated and any extension to your

registration period because of time lost earlier will, at that stage, incur additional tuition fees. Where medical circumstances are involved the Department will require supporting documentation from your doctor or other medical officer. All such evidence is treated as confidential.

## 11 Student Learning Advisory Service

**The Student Learning Advisory Service (SLAS)** is part of the Unit for the Enhancement of Learning and Teaching. This is a free, friendly advice service providing guidance and information on all aspects of effective learning and study skills to ALL students (from all subject disciplines and subject levels) from the minute they arrive at the university until they finish their studies. The service provides academic advice and guidance for students interested in strengthening their study skills or who wish to discuss a specific study problem. This is provided in addition to the subject-based support available within Departments. The Service also works in close partnership with academic departments in many of its initiatives and collaborates with other constituencies of the university e.g. associate or partner colleagues. It offers the following:

### Individual and confidential advice and study guidance

on topics such as time management, essay and report writing, effective reading and note-taking, revision and exam techniques, organisational skills and issues such as motivation and concentration.

### Maths and Stats Support

In partnership with IMSAS, we provide mathematics support for our students. If you wish to obtain specific and individual support, we offer two services: Stats Helpdesk and Maths Helpdesk.

### Additional help with writing:

We work in collaboration with two Royal Literary Fund Writing Fellows (RLF) at both Canterbury and Medway. They are there to help students with any aspect of their writing.

## PROGRAMMES

**Workshops:** Each term, in partnership with the Library and Information services, SLAS offers a series of generic workshops on study skills that students from all levels and departments can attend. See: <http://www.kent.ac.uk/uelt/learning>

**VALUE MaP:** A programme for mature and/or part-time students which is run as a series of Saturday workshops on effective study on the Canterbury, Medway and Tonbridge campuses

## LEARNING RESOURCES

SLAS has a range of leaflets and books on study skills and techniques. Please note that the Student Learning Advisory Service is a wheelchair accessible venue.

Contact Information		
	Canterbury	Medway
Where:	Uelt (between the banks and the Grimond Building)	Study Skills Helpdesk Drill Hall Library, Pembroke Campus
Open:	Monday –Friday 9.00am–5.00pm	Monday – Friday 9.00 am – 4.00 pm
Phone:	Ext. 4016 direct line 01227 824016	or 01634 888884
Email:	<a href="mailto:learning@kent.ac.uk">learning@kent.ac.uk</a>	<a href="mailto:learning@kent.ac.uk">learning@kent.ac.uk</a>
Web site:	<a href="http://www.kent.ac.uk/uelt/learning">http://www.kent.ac.uk/uelt/learning</a>	

Further information is available at: <http://www.kent.ac.uk/uelt/learning/index.html>

## 12 Disability and Dyslexia Support Service

The University is committed to improving access to learning for all students and provides a wide range of educational support services. Details of the support which can be provided, how to register and other information is available at: <http://www.kent.ac.uk/guidance/disabilityanddyslexia/>

## 13 Quality Assurance and Enhancement

The University has a Code of Practice for Quality Assurance (Research Students) which is available on-line at: <http://www.kent.ac.uk/uelt/quality/rescode2005/index.html>

This operates alongside the Faculty Code of Practice for Research Degree Candidates and the Faculty Management of Graduate Studies procedures. These documents set out the responsibilities of the department, the departmental Director of Graduate Studies, the Supervisor and the Student and are available at: <http://www.kent.ac.uk/stms/studying/postgraduate/index.html>

## 14 Complaints and Appeals Procedures

### 14.1 Comments, Suggestions and Complaints

The University welcomes comments and suggestions for improvements which should be addressed, as appropriate, to the member of staff concerned, (such as Head of Department, Dean of the Faculty, College Master, Librarian, Director of Information Services, President of Kent Union).

The University will respond quickly to complaints and, if substantiated, will take appropriate remedial action whenever possible.

The Staff-Student Liaison Committee and representation by postgraduate research students on the Graduate Studies provide opportunities for students to discuss issues affecting them.

In the event of a complaint, students should consult their supervisor(s) in the first instance, then the Director of Graduate Studies or the Head of Department. The Head of the Department should be made aware of the nature of the complaint if it is not resolved promptly. If the matter cannot be resolved at departmental level students are advised to consult the Chair of the Faculty Research and Enterprise Committee or the Dean of the Faculty. Where the complaint is of a serious nature it should be made in writing.

The University has special arrangements for dealing with specific concerns and these are set out in Section 6 of the Student Charter (see <http://www.kent.ac.uk/regulations/general.html>)

In all cases the officer(s) concerned will ensure that a written response is made within 2 weeks of the receipt of the complaint.

### 14.2 Appeals Procedures

An appeal against an adverse decision affecting a student's progress (for example refusal to transfer from the provisional category or a recommendation to withdraw from study) must be made in writing to the Faculty Officer.

The University has published Standing Orders Governing Research Appeals, and these are available at:

<http://www.kent.ac.uk/uelt/quality/regulations/research/soga.html>

Appeals made under these Standing Orders must be submitted using the relevant form, a copy of which may be downloaded from

<http://www.kent.ac.uk/uelt/quality/regulations/research.html>.

## 15 Academic Staff

Individual staff web pages may be found at: <http://www.cs.kent.ac.uk/people/staff/index.html>

Mr David Barnes	DJB	D.J.Barnes	7696	SW110
Dr Fred Barnes	FRMB	F.R.M.Barnes	4278	S119
Dr Eerke Boiten	EAB	E.A.Boiten	7615	SW13
Dr John Bovey	JDB	J.D.Bovey	7688	SW10
Professor Howard Bowman	HHB	H.Bowman	3815	SW15
Ms Janet Carter (Senior Tutor)	JEC	J.E.Carter	7978	S104
Professor David Chadwick	DWC	D.W.Chadwick	3221	S106
Dr Olaf Chitil	OC	O.Chitil	4320	S129
Dr John Crawford	JSC	J.S.Crawford	3784	SW06
Dr Roger Cooley	REC	R.E.Cooley	3816	S103
Dr Rogério de Lemos	RDL	R.Delemos	3628	S117
Mr Bob Eager	RDE	R.D.Eager	4143	S108
Ms Sally Fincher	SAF	S.A.Fincher	4061	S101
Ms Aliy Fowler	AMLF	A.M.L.Fowler	3812	S08
Dr Alex Freitas	AAF	A.A.Freitas	4371	S108
Mrs Ursula Fuller	UDF	U.D.Fuller	7693	S103
Dr Tim Hopkins	TRH	T.R.Hopkins	3793	SW108
Dr Colin Johnson	CGJ	C.G.Johnson	7562	S102
Mr Richard Jones	REJ	R.E.Jones	7943	SW107
Dr Stefan Kahrs	SMK	S.M.Kahrs	7146	S128C
Dr Peter Kenny	PGK	P.G.Kenny	7236	S128
Professor Michael Kölling	MIK	M.Kölling	7570	SW11
Dr Andy King	AMK	A.M.King	7911	SW105
Mrs Janet Linington	JWL	J.W.Linington	7936	S103
Professor Peter Linington	PFL	P.F.Linington	3630	S120
Dr Peter Rodgers	PJR	P.J.Rodgers	7913	SW106
Dr Andrew Runnalls	ARR	A.R.Runnalls	3821	S105
Dr Nick Ryan	NSR	N.S.Ryan	7699	SW05
Professor Simon Thompson (Head of Department)	ST	S.J.Thompson	3820	SW109
Mr Gerald Tripp	GEWT	G.E.W.Tripp	7566	SW07
Mr Ian Utting	IAU	I.A.Utting	3811	SW14
Professor Peter Welch	PHW	P.H.Welch	3629	S118

## Appendix 1: Student Progress Monitoring Schedule

Year	Sept	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	
<b>Full-time</b>	<b>Graduate Studies Committee meets to review student progress and to report to the Faculty</b>												
Year 1		Induction Form	<i>Forms issued</i> <sup>2</sup>	Panel meets <sup>4</sup>			<i>Forms issued</i>				Submit Mini thesis	Mini thesis <sup>5</sup>	
Year 2								<i>Forms issued</i>		Panel meets			
Year 3				<i>Forms issued</i>			Panel meets						Reg. Ends
Extension Year <sup>6</sup>				<i>Forms issued</i>			Panel meets <sup>8</sup>						
<b>Part-time</b> <sup>7</sup>													
Year 1				<i>Forms issued</i>			Panel meets					<i>Forms issued</i>	
Year 2					Mini-thesis							<i>Forms issued</i>	Panel meets
Year 3								<i>Forms issued</i>		Panel meets			
Year 4				<i>Forms issued</i>			Panel meets						
Year 5				<i>Forms issued</i>	Panel meets								Reg. Ends

- At the April Graduate Studies Committee progress will be available for Year 1 – first meeting and Year 3 Final meeting.

At the September meeting progress will be available for Year 1 mini-thesis and Year 2 as well as any panel for Year 3 students deemed at risk in April.

The timetable will enable report on student progress to the Faculty at its Autumn Term meeting

- “Forms issued” indicates the point at which the Course Administration Office issues the reminder to panels and students to meet, with report forms and deadline for their return.
- Supervisor evaluation forms are issued at each monitoring point.
- Attendance records at Research Student Training sessions will be available for this meeting.
- The mini-thesis examination process must be completed before the first anniversary of registration.
- The Extension Year timetable applies to students whose registration was full-time or part-time.
- Progress meetings for Part-time students have been scheduled with the first for 6 months, the mini thesis after 12 months registration and, thereafter, on an annual basis.
- The Supervisor may report on behalf of the panel at this point if there is no cause for concern.

## Appendix 2: Development Needs Analysis (Skills Audit)

### Skills Audit A: Research Skills & Techniques

(A) Research skills & techniques – to be able to demonstrate	Characteristic descriptor of an experienced PhD student (Level 3)	Competence level	Evidence	Training opportunity
<b>Problem solving</b> 1. The ability to recognise and validate problems.	Able to define research problems from a coherent analysis of gaps in existing knowledge base. Able to identify areas where investigation might produce new knowledge. Able to write a research proposal, describing research questions, context, sources and methodology to the level required of applications for postdoctoral work.			
<b>Original critical thinking</b> 2. Original, independent and critical thinking, and the ability to develop theoretical concepts.	Able to formulate hypotheses and/or research questions for the purposes of designing a personal research project. Able to provide new and innovative research ideas. Able to objectively and knowledgeably criticise published research.			
<b>Discipline knowledge</b> 3. A knowledge of recent advances within one's field and in related areas.	Can communicate knowledgeably about their research topic with supervisor and peers, debating concepts. Familiar with recent relevant literature. Can write a literature review of publication standard on the topic.			
<b>Discipline methodologies</b> 4. An understanding of relevant research methodologies and techniques and their appropriate application within one's research field.	Able to discuss and prioritise a range of methodologies to address a research question. Has in-depth knowledge and understanding of appropriate techniques and their application.			
<b>Critical literature review</b> 5. The ability to critically analyse and evaluate one's findings and those of others.	Ability to objectively acknowledge weaknesses and assumptions in one's findings. Ability to apply the same objectivity to the work of others. Good understanding of appropriate methods for testing conjectures or tentative conclusions. Excellent IT ability in data collection analysis and presentation in appropriate graphical form.			
<b>Progress summaries</b> 6. An ability to summarise, document, report and reflect on progress.	Able to verbally summarise a research problem succinctly to different audiences. Able to objectively criticise own research and define future work. Able to produce written summaries of a variety of lengths to suite the purpose. Able to write progress reports on research of an appropriate professional standard			

**Skills Audit B: Research Environment Skills**

(B) Research environment– to be able to demonstrate	<b>Characteristic descriptor of an experienced PhD student (Level 3)</b>	<b>Initial competence level</b>	<b>Evidence</b>	<b>Training opportunity</b>
<b>Research context</b> 1. Show a broad understanding of the context, at the national and international level, in which research takes place	Fairly detailed understanding of how research in a particular field is organised nationally in terms of institutions and centres, congresses, societies, publications, and funding sources and some understanding of these internationally			
<b>Research ethics</b> 2. Demonstrate awareness of issues relating to the rights of other researchers, of research subjects, and of others who may be affected by the research, eg confidentiality, ethical issues, attribution, copyright, malpractice, ownership of data and the requirements of the Data Protection Act.	Be aware of subject appropriate guidance e.g. 'Safeguarding good scientific practice' – Joint Statement of the Director General of the Research Councils and the Chief Executives of the UK Research Councils 1998'. Be aware of university guidelines on copyright and ownership of research			
<b>Good research practice</b> 3. Demonstrate appreciation of standards of good research practice in their institution and/or discipline.	A good understanding of any relevant University guidelines on research practice (e.g. ethical practice) and any statutory regulatory requirements in your subject area			
<b>Health &amp; Safety</b> 4. Understand relevant health and safety issues and demonstrate responsible working practices.	Be competent in working with any relevant health and safety regulations			
<b>Research Funding</b> 5. Understand the processes for funding and evaluation of research.	Knowledge of how large and small research projects can be funded, including knowledge of application and evaluation procedures.			
<b>Research Justification</b> 6. Justify the principles and experimental techniques used in one's own research.	Have good knowledge of competing techniques and approaches in subject area and their relative strengths and weaknesses			
<b>Commercialisation of research</b> 7. Understand the process of academic or commercial exploitation of research results.	Understanding of both procedures for submission and evaluation of research by journals and publishers and be able to prepare research results for submission. Understanding of the major conferences in the research area. Awareness of university facilities and support for exploitation of research			

**Skills Audit C: Research Management Skills**

<b>C) Research management – to be able to:</b>	<b>Characteristic descriptor of an experienced PhD student (Level 3)</b>	<b>Initial competence level</b>	<b>Evidence</b>	<b>Training opportunity</b>
<b>Project management</b> 1. Apply effective project management through the setting of research goals, intermediate milestones and prioritisation of activities.	Able to make plans and balance competing demands on time effectively.  Able to plan, organise, execute and evaluate a research programme. Able to set and prioritise a number of intermediate goals within an individual research project and to develop an effective strategy and timetable for meeting them			
<b>Library skills</b> 2. Design and execute systems for the acquisition and collation of information through the effective use of appropriate resources and equipment.	Able to collect and record information in an organised and professional way. Competence in relevant software. Able to conduct searches using appropriate online and offline resources			
<b>Bibliography skills</b> 3. Identify and access appropriate bibliographical resources, archives, and other sources of relevant information.	Able to demonstrate an excellent awareness of potential sources of relevant information for subject area. Fluent in referencing appropriate sources and able to use a variety of referencing styles and systems			
<b>IT skills</b> 4. Use information technology appropriately for database management, recording and presenting information.	Able to establish a bibliography at the level expected for scholarly publication and keep it up to date through searches and electronic services. Able to use appropriate software to prepare papers with any relevant special features, such as use of master documents, or embedding of charts, figures and images			

**Skills Audit D: Skills of Personal Effectiveness**

<b>D) Personal effectiveness – to be able to:</b>	<b>Characteristic descriptor of an experienced PhD student (Level 3)</b>	<b>Initial competence level</b>	<b>Evidence</b>	<b>Training opportunity</b>
<b>Willingness to learn</b> 1. Demonstrate a willingness and ability to learn and acquire knowledge.	Able to identify and exploit sources of information or instruction on a new area. Excellent attendance at seminars, meetings and conferences.			
<b>Creativity/originality</b> 2. Be creative, innovative and original in one's approach to research.	Ability to find solutions to difficult problems. Ability to develop new methodologies as required. Ability to generate new ideas and approaches			
<b>Open-mindedness</b> 3. Demonstrate flexibility and open-mindedness.	Able to analyse the strengths and weaknesses of one's own approach, and willing to complement it by an engagement with other approaches.			
<b>Self-assessment</b> 4. Demonstrate self-awareness and the ability to identify own training needs.	Able to evaluate a wide range of skills, evaluate training needs in the light of this and the requirements of the research project, develop a coherent plan for future training		Completed skills audit and development plan for forthcoming year	
<b>Self-discipline</b> 5. Demonstrate self-discipline, motivation, and thoroughness.	Able to work to a professional level without supervision. Able to demonstrate high levels of accuracy, organisation and attention to detail			
<b>Awareness of support</b> 6. Recognise boundaries and draw upon/use sources of support as appropriate	Be able to objectively consider gaps in knowledge, understanding or ability and be aware of possible sources of support such as the skills of colleagues			
<b>Self-reliance</b> 7. Show initiative, work independently and be self-reliant	Able to make and execute substantial research plans with guidance necessary only for specialist issues			

**Skills Audit E: Communication Skills**

<b>E) Communication skills – to be able to:</b>	<b>Characteristic descriptor of an experienced PhD student (Level 3)</b>	<b>Initial competence level</b>	<b>Evidence</b>	<b>Training opportunity</b>
<b>Academic writing</b> 1. Write clearly and in a style appropriate to purpose, eg progress reports, published documents, and thesis.	Able to produce a well-structured and well-written report of substantial length. Able to write concise, academic prose and express ideas with suitable clarity. Full control over a variety of styles			
<b>Critical writing</b> 2. Construct coherent arguments and articulate ideas clearly to a range of audiences, formally and informally through a variety of techniques.	Able to communicate own research orally and in written reports. Able to explain their research at a range of levels appropriate for e.g. international conference or non-specialist audiences. Able to produce well constructed clear presentations. Able to use slides, OHPs and Power Point confidently and easily in oral presentations. Able to provide feedback for their research subject of the kind expected in referee's reports for journals and publishers and to respond to such feedback.			
<b>Research presentation skills</b> 3. Constructively defend research outcomes at seminars and viva examination.	Able to present academic work at seminars and conferences fluently and confidently, and able to respond clearly and persuasively to questions and comments at such occasions			
<b>Promote public understanding</b> 4. Contribute to promoting the public understanding of one's research field.	Able to write and present research in an appropriate manner for specialist or lay audiences			
<b>Teaching skills</b> 5. Effectively support the learning of others when involved in teaching, mentoring or demonstrating activities.	Demonstrate an ability to effectively impart information to others. Have an understanding of possibilities for supporting the learning of others.			

**Skills Audit F: Networking & Teamworking Skills**

<b>F) Networking and teamworking – to be able to:</b>	<b>Characteristic descriptor of an experienced PhD student (Level 3)</b>	<b>Initial competence level</b>	<b>Evidence</b>	<b>Training opportunity</b>
<b>Networking</b> 1. Develop and maintain co-operative networks and working relationships with supervisors, colleagues and peers, within the institution and the wider research community.	Regular attendance at conferences and meetings, awareness of researchers in research field			
<b>Teamworking</b> 2. Understand one's behaviours and impact on others when working in and contributing to the success of formal and informal teams.	Can work in teams (e.g. research groups) on complex projects and can both reflect on quality of teamwork and solve teamworking problems as they arise			
<b>Feedback Skills</b> 3. Listen, give and receive feedback and respond perceptively to others.	Aware of techniques of giving feedback. Aware of others in research group.			

**Skills Audit G: Career Skills**

<b>G) Career management – to be able to:</b>	<b>Characteristic descriptor of an experienced PhD student (Level 3)</b>	<b>Initial competence level</b>	<b>Evidence</b>	<b>Training opportunity</b>
<b>Professional development</b> 1. Appreciate the need for and show commitment to continued professional development.	Active member of professional institution. Attending meetings, organising events, local secretary. Attends seminars and conferences			
<b>Career management</b> 2. Take ownership for and manage one's career progression, set realistic and achievable career goals, and identify and develop ways to improve employability.	Be aware of potential employers, general recruitment practices and effective job hunting techniques			
<b>Transferable skills</b> 3. Demonstrate an insight into the transferable nature of research skills to other work environments and the range of career opportunities within and outside academia.	Be aware of potential career paths and the generic aspects of a PhD, including research techniques, project planning and communication skills			
<b>Promote oneself</b> 4. Present one's skills, personal attributes and experiences through effective CVs, applications and interviews.	A broad knowledge of types of CV's, interview techniques and standard questions and techniques such as psychometric testing. Awareness of the variety of interview possibilities, including assessment centres.			