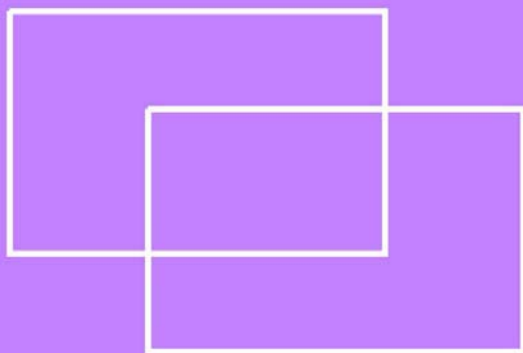


FACULTY OF SCIENCE

POSTGRADUATE HANDBOOK



An information booklet for
MSc and PhD students



UNIVERSITY OF CAPE TOWN

UNIVERSITY OF CAPE TOWN

FACULTY OF SCIENCE

MASTERS AND PHD STUDENTS: A HANDBOOK

MESSAGE FROM THE DEAN

Dear Postgraduate Student

Postgraduate students are the lifeblood of research in our Science Faculty, vital for research impetus and a prime source of new and interesting ideas. We are a university with an excellent reputation for the quality of our research, both nationally and internationally. We are committed to conducting high level research and you, as one of our postgraduate students, play a pivotal role.

The aim of this booklet is to provide information on a range of important policies and procedures of direct relevance to you as a higher degree candidate. By registering with us for a higher degree you automatically enter into a “working relationship” with your academic supervisor(s) and colleagues. This means that your supervisor has a well defined responsibility to provide you with the assistance you need to ensure that you are successful in your postgraduate study and research. At the same time, it is expected that you will commit yourself fully to your research programme. Successful research requires independent thought and your supervisor will encourage you to think independently but will guide you on your way. Doing a research degree is a challenging task and the critical thinking and oral and written communication skills that you will learn will strongly enhance your future career prospects.

I ask you to read this booklet carefully because it contains very important information which, if not well understood may cause you much frustration. We are proud of the long tradition of outstanding research for which this Faculty is well known, and of the excellent Masters and Doctoral graduates who began their careers as post-graduates in this Faculty. I wish you every success in your research and trust that you will thoroughly enjoy this experience and be able to look back on these years as among the most enjoyable, stimulating and productive of your life. We look forward to sharing the excitement of this experience with you.

Best wishes
Professor K A Driver
Dean, Faculty of Science

MESSAGE FROM THE SCIENCE POSTGRADUATE STUDENTS' ASSOCIATION

Dear Postgraduate Student,

On behalf of the Science Faculty Postgraduate Students' Association (PGSA) I welcome you to the University of Cape Town. The Science Faculty PGSA is an academic association under the umbrella UCT student governance and is mandated by election to:

“To represent the interests of all postgraduate students in the Faculty of Science and to establish an active, vibrant and diverse postgraduate culture that contributes to improving the quality of academic and social life.”

The PGSA is an effective channel for postgraduate students to raise any concerns through their departmental representatives.

Departmental Representatives represent postgraduate students at Faculty level in the form of Faculty PGS Associations and at University level as an Executive Committee (PGSA ExCo). These bodies contribute actively to various Faculty and University decision-making structures. Standing for election is not only a mark of trust by your peers but a method by which you can give back to the greater student governance and help develop a better community.

Regards,

Scebi Mkhize
Science Faculty PGSA Chairperson

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1. INTRODUCTION

This booklet is an attempt to explain some of the more important administrative issues related to the postgraduate experience. Your time and energy should be spent enjoying the excitement of your research, rather than wrestling with bureaucracy, and you are encouraged to take the time to read through these pages so that you are more aware of the processes that will affect your life as a postgraduate student.

Postgraduate education at UCT commonly results in one of two outputs: a Doctor of Philosophy degree (PhD) or a Masters degree (MSc/MPhil). Masters degrees in the Science Faculty may be obtained in one of two ways; (i) by a research dissertation; (ii) by coursework and a research dissertation/research project.

Note that this handbook is intended to serve as a guide to postgraduate students. Whilst it draws on other published University documents and Handbooks, it does not replace them. The rules for the various higher degrees are set out in the Handbook of General Rules & Policies (Handbook 3 in the UCT series) and the Faculty of Science Student Handbook (Handbook 11 in the UCT series).

2. WHAT IS THE DIFFERENCE BETWEEN A MASTERS AND A DOCTORAL DEGREE?

The most basic difference between a Masters degree and a PhD is that the PhD is the higher degree: it requires more effort and time to obtain. However, in practice the difference is more subtle than this. Indeed, by convention a Masters degree is normally awarded following the successful examination of a dissertation, which means a discourse or discussion. A PhD is awarded on the basis of a thesis (an assertion or tenet that has to be proved against critical argument). In practice, however, the two terms are commonly used interchangeably.

A Masters degree is frequently a student's first encounter with real research. Its primary function is training in research. It is a clearly circumscribed piece of work that the supervisor feels confident can be undertaken within, or close to, the minimum time period. The skills imparted, and which the candidate hones through the process, include posing a research question, undertaking a relevant literature review, engaging rigorously with research methods, drawing valid conclusions and communicating findings in a clear, logical and scholarly way. Importantly, the work does not have to contain original findings - it must simply demonstrate a mastery of the methods of research.

The degree of Doctor of Philosophy, on the other hand, demands that the candidate is able to conduct independent research on his/her own initiative. Through the thesis the candidate must be able to demonstrate in his/her thesis

that he/she is at the academic forefront in the topic selected, that the work is original and that it advances knowledge.

3. **MASTERS DEGREES IN SCIENCE**

A candidate entering a Masters programme must generally have a BSc (Honours) degree or four-year undergraduate equivalent (i.e. a four-year degree post NSC equivalent). Departments in the Science Faculty offer three types of Masters degree; the differences are summarised below:

- **Master of Science:** This is a research-based degree in which a dissertation on a selected research topic is completed under the guidance of a supervisor. The majority of students in the Science Faculty complete their Masters degree in this manner. Entrance requirements are an Honours degree or four-year equivalent.

- **Master of Science (by coursework and dissertation):** In this degree a candidate completes 50% of the requirement through coursework, and 50% by way of a dissertation on a piece of supervised research. The dissertation is by definition smaller in scope than one completed where the dissertation counts for the full degree. Entrance requirements are an honours degree or four-year equivalent.

- **Master of Philosophy (MPhil):** This is either a research degree, or a degree obtained by coursework and dissertation, for candidates engaged in cross-faculty research dissertations or where a candidate comes from a non-science academic background. Entrance requirements are an Honours degree or four-year equivalent.

A detailed listing of the fields in which higher degrees are offered in the Faculty is set out in the Faculty Handbook.

4. **DOCTORAL DEGREES IN SCIENCE**

There are two types of doctoral degrees offered in Science – a PhD (Doctor of Philosophy) and DSc (Doctor of Science). The former is obtained via research submitted as a thesis and is in practice by far the most common mechanism for obtaining a Doctoral degree. The DSc degree has very rarely been awarded at UCT, and is normally based on a career of high quality publications focussed on some or other topic; in this regard it is more relevant to senior researchers late in their careers. The entrance requirement to the PhD is a Masters degree, but it is sometimes possible to upgrade to a PhD after completing the first year of Masters research.

5. **ACADEMIC LOCATION OF THE DEGREES**

Masters degrees are awarded by the Science Faculty. Masters degrees are discipline-specific and students are located within the appropriate department. The PhD is a University degree (the award of the degree is the responsibility of the Doctoral Degrees Board), but students are academically located in the department of the principal supervisor.

6. **STUDENT FUNDING**

The Postgraduate Funding Office, located on the upper campus (Otto Beit Building), is an important source of information and advice about potential funding sources and the procedures necessary to access these.

There are a number of potential sources of postgraduate student funding:-

- National and International Foundations.
- University-wide scholarships. All students are eligible to compete for these.
- Discipline-specific scholarships. A list of these pertinent to the Science Faculty can be found in the University's Handbook 14 in the UCT series, Financial Assistance for Postgraduate Study and Postdoctoral Research.
- National Research Foundation Bursaries. These take two forms:
 - scholarships awarded directly to students, on application;
 - bursaries awarded to supervisors for distribution to students, at the discretion of the supervisor but within a framework of conditions laid down by the NRF.
- Industry. Industry funding to academic staff members to undertake research projects may include a component to be awarded as a student bursary.

Students are encouraged to apply for financial support to a full range of potential sources early in their final year of undergraduate study, or in the year before they wish to initiate their postgraduate studies. For further information please visit the website <http://www.uct.ac.za/research/pgfo/>

7. **APPLYING FOR ADMISSION**

7.1 **Application Procedure**

The Faculty will consider an application to register for a Masters or PhD degree from anyone who meets the academic entrance requirements. For a Masters degree this is an Honours degree or equivalent. An Honours degree is a post-Bachelor degree qualification. A four-year Bachelors degree that is considered

equivalent to a South African Honours degree may be accepted. Entrance requirement for registration as a PhD student is a Masters degree or equivalent. Where a candidate does not have a Masters degree, initial registration for a Masters will be required, with the possibility of upgrading to a PhD registration at the start of the second year of registration if satisfactory progress is made (see section 8.4). International students might require certification of their degree equivalence by the South African Qualifications Authority (contact the Postgraduate Administrator in the Faculty Office for the address); the Faculty reserves the right to make a final judgement on the South African equivalence of a foreign degree.

Prospective candidates wishing to register for a PhD or a Masters by dissertation should have a discussion with the Head of Department or prospective supervisor prior to applying formally to the University. Unless currently registered in the Department for another degree, you will generally have to provide the Head of Department with the following:

- a *curriculum vitae* which includes your personal details, your academic history and any work experience;
- an official transcript of your university results (non-UCT students);
- in the case of an application for the PhD, provide a summary of your Masters research and list any publications which have arisen from this;
- the names and contact details (including e-mail addresses) of two referees who are familiar with your recent academic studies;
- a brief outline of your area of interest for research towards your Masters or PhD degree;
- the names of prospective supervisors if you have a preference;
- an indication of when you will be available to start your studies;
- an indication of whether you will require funding to cover the costs of study fees and living expenses, and details of any scholarships that you have applied for.

Only once you have some commitment from the HoD or potential supervisor should you apply formally to the University. Students from non-English speaking backgrounds may be required to take the international Toefl test. Acceptance by a Department is provisional, and you will still require formal acceptance by the Faculty of Science.

The formal University application procedure requires that an applicant complete a standard UCT application form (UCT1 for persons currently not at UCT or UCT5 for those currently registered for another degree at UCT) via the Admissions Office, Kramer Building (or online at www.uct.ac.za/apply/applications/postgraduates/) for admission to the Science Faculty. Acceptance by a Department is provisional, and you will still require formal acceptance by the Faculty of Science. Advice on application procedures can be obtained from the Postgraduate Administrator in the Science Faculty

Office. *Do not arrive at UCT until you have been formally notified by the Faculty of Science that you have been accepted for postgraduate study.*

Places on coursework Masters degree programmes are normally limited and applicants are accepted on a competitive basis. Students interested in applying for admission to one of these programmes should first consult the Department concerned to determine closing dates for applications, and what documentation is required. Some Departments have their own application forms. Only once you have been advised by the Department that they are willing to accept you in principle should you apply formally to the University (see above).

7.2 **Finding a Supervisor**

Once a student has decided on the broad research area in which he or she wishes to work, a suitable supervisor needs to be identified. Except in exceptional circumstances, the principal supervisor must be a full-time permanent member of the academic staff of the Faculty. Co-supervision by persons within or outside the University is possible, but a person employed outside of the University may not act as principal supervisor.

The choice of supervisor has to be approved by the Head of Department. It is important that the Head of Department is satisfied that the proposed supervisor has adequate knowledge, time and resources to do the job properly. In the case of Doctoral candidates, the Doctoral Degrees Board is also responsible for the adequacy of the supervisor. Academic staff who do not have a PhD, will not normally supervise PhD degrees. In rare cases, people who are experts in their fields and have prior supervisory experience, but who do not have a PhD, are approved by the Doctoral Degrees Board to be the primary supervisor of a PhD thesis.

In the case of a student currently registered at UCT, the process of finding a supervisor which is outlined above will normally take place during the year prior to embarking on postgraduate study.

7.3 **Selecting a Research Topic**

The selection of a topic for research for a Masters or PhD may occur in two ways. Either the topic of research is identified by the prospective student, or a supervisor might provide a number of possible projects from which the student can choose; either way the supervisor and student need to agree on the selected research topic. The suitability of a research topic depends not only on its intrinsic academic merit, but also on funding realities. It is, however, the responsibility of the candidate to make the final selection, and it is wise to choose a topic of strong interest rather than one offering the better funding.

8 REGISTRATION

8.1 First registration

8.1.1 Thesis/dissertation students

There is no specific date for first registration of newly entering postgraduate students who are registering for a PhD or Masters degree (by dissertation only) - commencement is by mutual arrangement with the supervisor. However, Masters and PhD students who need to have the year of first registration counted as an academic year for their minimum period of registration (1 year for a Masters, 2 years for a PhD) must have been registered for the degree concerned by 30 April. Registration follows formal acceptance by the Faculty of an application for admission and involves completion of 3 forms – a registration form, a curriculum form and most importantly a Memorandum of Understanding (MoU). Registration at any time in the second semester incurs 50% fees.

PhD registration requires a short written research proposal outlining the scope and intentions of the research that must accompany the registration forms. Final responsibility for registration and acceptance of a PhD student lies with the Doctoral Degrees Board. New PhD students will generally be required to develop a full research proposal during the first six months of their registration, and this may be a stated condition in the MoU. Failure to produce a satisfactory proposal within the allotted time frame will lead to termination of registration at the end of the first year of registration. Acceptance of the full PhD proposal may involve the candidate presenting a seminar, based on a written research proposal, to departmental staff, other postgraduate students and others with specialist knowledge in the field of study, which demonstrates, *inter-alia*, that:

- The candidate is familiar with the main literature in the field;
- There is sufficient scope in the topic for a PhD and there is a clear definition of the hypotheses proposed;
- The candidate has the ability to undertake the work;
- The potential contribution to knowledge has been identified and there is a clear definition of the key questions to be addressed in the context of the proposed hypothesis;
- The method of research is sound and achievable and there is a clear knowledge of the experimental procedures to be used and the methodology to be pursued in analysing the results.

In the case of Masters degrees, the Head of Department and supervisor must be satisfied that the student is equipped for Masters degree study and has a suitable research topic before he/she is accepted and registered. Candidates are commonly expected to submit, via the proposed supervisor, a written proposal to the Head of Department (as a guideline 3-6 pages) which outlines, *inter alia*,

- The topic to be investigated
- Familiarity with the central literature within the broad field of study
- Clarity on the research methods

8.1.2 Masters by coursework and dissertation

Students registering for a coursework Masters, need to do so by the first day of lectures. Normally a specific day is set aside (consult with the Department concerned in this regard) to complete registration procedures which involve completing a registration form and curriculum form. When registering for the dissertation component (as a separate course code), either simultaneously or the following year, a Memorandum of Understanding (MoU) will also need to be completed. Registration must have been completed by the third week in February at the latest, or there is a fee penalty for late registration.

8.2 **International Students**

8.2.1 Study Permits, Health insurance, Fees

In terms of current legislation, no international student may register at the university or participate in an academic programme unless he/she is in possession of a valid study permit and proof of medical insurance cover. Once a formal offer of acceptance has been received from the Faculty, international students are required to gain clearance from the International Academic Programme Office (IAPO), which requires: (i) a certified copy of passport showing photograph and passport number; (ii) the page containing the valid study permit; (iii) documentary evidence of health insurance cover; (iv) proof of payment of fees. This will lead to provision of an “International Students Pre-Registration” form from IAPO. These documents must be submitted with the registration forms to the Postgraduate Officer – Faculty of Science. The registrations of International Students will not be approved without these documents, nor will they be approved unless the necessary fee payments have been made. Any queries should be directed to the International Academic Programmes Office (IAPO) at (021) 650 2822/3740 or iapo@world.uct.ac.za.

8.2.2 International Fee Waivers

Applications may be made to have the international registration fee reduced to the level of local fees, either on the grounds of proven financial hardship and where the full funding available to support the research and student stipend is from local sources, or in rare cases on academic merit. Application must be made via the supervisor and HoD to the Faculty Office, using the appropriate form, for consideration by the Deputy Dean (Postgraduate Affairs). The final decision is made by the Deputy Vice-Chancellor charged with this portfolio. All international students must, however, pay the IAPO retainer fee.

8.3 **Renewal of Registration**

Each candidate is responsible for maintaining the continuity of his/her registration. *Registration* and *Progress & Planned Activity* forms for returning candidates, with instructions, are distributed to Departments in January (a copy is shown in Appendix B). Candidates who for some reason do not receive their forms by mid-February are expected to follow up and obtain them from the Department. Registration must be completed by the last day of February each year. A penalty fee is charged for late registration. Students who have exceeded

two years registration for the Masters degree or three years registration for the PhD degree, and who are allowed to return on probation will have received a letter from the Faculty Office to this effect. Before being re-registered such students will be required to describe on the Progress & Planned Activity form, with Supervisor and Head of Department endorsement, how they aim to complete their thesis/dissertation by November of the probation year. PhD candidates must maintain unbroken registration between admission and graduation, unless granted leave of absence.

8.4 **Change of Registration**

8.4.1 Upgrading to a PhD/downgrading to a Masters

It is possible to change the status of registration during the process of study. Thus, it is possible for a Masters degree to be upgraded to a PhD if the supervisor believes that the student has made good progress, has shown suitable potential and that there is scope within the project to lead to a higher qualification. This would normally occur at the start of the second year of Masters registration, and at the latest must occur by the end of the second year of Masters registration. It is not possible to backdate registration to the first year. It is also not possible to use the work of the Masters degree towards a PhD after the examination process. Similarly, it is possible to downgrade from a PhD to a Masters degree. Again, however, this must occur before examination. It is not possible for a Masters degree to result from a failed PhD.

The documents to be submitted to the Faculty Office in order to process an upgrade from Masters to PhD are a letter of motivation signed by the supervisor(s) and Head of Department, a PhD research proposal, and a UCT5 application form.

The documents to be submitted to the Faculty Office in order to process a downgrade from PhD to Masters are a letter signed by the student requesting a downgrade, together with a motivation from the supervisor(s) and Head of Department and a UCT5 application form.

8.5 **Leave of Absence or Cancellation/Discontinuation of Studies**

8.5.1 Leave of absence

If it is impossible for a candidate to continue with his/her studies/research in any given year (for example due to serious illness, work commitments) but he/she intends continuing in the following year then he/she must apply for leave of absence, in writing, to the Dean. Leave of absence can be awarded for a full year, the first six months or the second six months of the year. A fee adjustment will occur for the period awarded. At PhD level a maximum of one year LOA is allowed by the Doctoral Degrees Board. The request for leave of absence must state the period, the reasons and include supporting documentation (e.g. medical certificate), and have the signed support of the supervisor and Head of Department. Applications to grant leave of absence retrospectively will only be considered in exceptional circumstances.

8.5.2 Cancellation/Discontinuation of Studies

If a candidate will be discontinuing studies permanently then he/she must formally cancel registration in writing on the prescribed form. The cancellation form is obtainable from <http://www.uct.ac.za/students/postgraduates/administration>. This is of considerable importance because if a candidate leaves without cancelling he/she will still be liable for fees that are payable. Applications for retrospective cancellation of registration are not accepted: there are specified dates after which a cancellation cannot be accepted or any fees refunded (details are in the Fees Handbook).

9. SUPERVISION

9.1 Supervisors

All students registering for a degree by dissertation will be formally allocated a supervisor, who is responsible for giving guidance. Co-supervision by people from within or outside of the University is possible, but the principal supervisor must always be a full-time academic member of staff within the Department in which the student is registered. Emeritus Professors may act as co-supervisors but not as principal supervisor. However, they may continue as principal supervisors of students who were registered under them before their retirement. In the first instance, the allocation of supervisors is the responsibility of the Head of Department, even though a student may have approached an individual staff member, or *vice versa*. The Head must be satisfied that the supervisor has the necessary expertise, knowledge and skills to supervise the research programme in question. If the Head is not satisfied that the experience/expertise of the supervisor is sufficient, he/she may insist on a co-supervisor being appointed.

Generally, members of staff should have a PhD in order to supervise a PhD student, but this does not necessarily exclude a member of staff without a PhD from supervising a PhD. Without exception, however, any member of staff without a PhD seeking to be the primary supervisor of a PhD candidate will require formal acceptance by the Doctoral Degrees Board. The application to the DDB should be brought by the Head of Department, via the Dean, motivating the case. In the case of applicants with a track record of successful supervision, this accreditation will not normally be withheld.

9.2 Memorandum of Understanding between Postgraduate Students and Supervisor

For Masters and PhD registration, the Faculty has introduced a *Memorandum of Understanding* (MoU) to be signed in the first year of registration by both supervisor and candidate, clarifying issues relating to respective roles and responsibilities, timing, funding (if appropriate) and intellectual property. A copy of the MoU form is shown in Appendix A. *The MoU is an important 'contract' between candidate and supervisor and needs to be taken seriously,*

and filled out in as much detail as possible. An electronic copy of the MoU is available on the Science Faculty web site.

Before the start of the second and subsequent years of registration, a *Progress & Planned Activity* form (Appendix B) needs to be completed and signed by both the candidate and supervisor. This process represents an annual review of progress and should be seen as an extension to the initial MoU. If in the opinion of the supervisor, adequate progress is not being made, the Progress & Planned Activity form should clearly lay down criteria (such as submission dates and milestones) against which further progress shall be measured. If progress continues to be unsatisfactory, the Dean and, in the case of PhD candidates, the Doctoral Degrees Board, may refuse re-registration. This is a formal document and the student and supervisor will be held to it.

If, after 2 years in the case of Masters candidates and 3 years in the case of PhD candidates, dissertations have not been submitted, the Dean will normally send candidates a formal letter of warning giving them one year to submit, failing which re-registration will be refused.

9.3 **Roles and Responsibilities of Student and Supervisor**

Responsibility of the student:

- To acknowledge and accept primary responsibility for his/her education.
- To demonstrate a good work ethic, in order to meet the expected throughput rate (2 years for a Masters student, 3-4 years for a PhD student).
- To share ideas and to work collegially.
- To participate in and to contribute to the life of the department, including being available to demonstrate at undergraduate practicals/tutorials.
- To commit to co-publication with the supervisor.
- To familiarise him/herself with the University rules, particularly with regard to plagiarism, and to commit to respecting those rules.

Responsibility of the Supervisor:

- To provide information relating to relevant literature and sources.
- To facilitate access to necessary samples, field areas and analytical equipment.
- To discuss and critically evaluate the candidate's findings and ideas.
- To read, criticise and annotate draft chapters and progress reports within a reasonable time.
- To advise the candidate on the form and structure of the dissertation/thesis.

- To train the candidate in the conventions of scholarly presentation.
- To arrange for a suitable replacement (with agreement from the HoD) if absent for any substantial period of time.
- To be familiar with the rules of the degree and advise the candidate on such matters.
- To help integrate the student into the academic and social life of the department.

9.4 **Appeals**

The relationship between supervisor and postgraduate student is an important one: if it is unsatisfactory it can significantly and negatively impact on the educational experience. If serious problems develop in this relationship, the student should normally:

- Raise the matter with the supervisor and seek to resolve the matter personally.
- If this does not resolve the matter, the problem should be referred to the Head of Department.
- If the supervisor is the Head, it should be referred directly to the Deputy-Dean charged with Postgraduate Affairs.
- If the supervisor is the Dean or a Deputy Dean, the matter should be referred to the Deputy Vice-Chancellor with the research portfolio.

In the event that the above preferred route is not easily followed, the Chair of the Postgraduate Student's Association should be approached for advice.

9.5 **Supervision and Attendance at the University**

During the period of his/her registration, a higher degree candidate will be expected to be available on campus for discussion with his/her supervisor. For persons who are based outside Cape Town there is generally an expectation that the candidate will spend some period of time on campus interacting with the supervisor; the expected time spent on campus varies from Department to Department, and needs to be clarified with the supervisor and department concerned. In any event, a candidate must be prepared to make him/herself available for discussion at the University if required.

10. **UNSATISFACTORY PROGRESS**

Heads of Departments report each year, to the Faculty Examinations Committee, the names of Masters and PhD students whose progress is considered unsatisfactory. In the case of Masters degrees, these would be students who have already been registered for two years and not yet submitted. In the case of PhD degrees, these are students who have been registered for four years and have not yet submitted. Extenuating circumstances, if any, will be tabled at that meeting. If, in the view of the Committee, there are insufficient mitigating circumstances,

the Dean will send a warning letter informing the candidate that he/she will be permitted to register in the following year on condition that his/her thesis/dissertation is submitted in that year. He/she will not be permitted to register thereafter, except with the special permission of Senate.

11. **ETHICS**

The issues of ethics and intellectual honesty are vital to university life. The Faculty takes the issue of ethics in research very seriously and to this end has established a Faculty Ethics for Researchers Committee. The terms of reference of this Ethics Committee include:

- to consider all ethical matters related to research in the Faculty including, but not exclusively, conflicts of interest, authorship, the relationships between junior and senior research workers, and the role of the scientist in society
- to deal with any ethical issues brought to the attention of the Committee by researchers in the Faculty
- to screen and approve, or otherwise, all research proposals in the Faculty that relate to human or animal subjects; this includes proposed research involving students or staff, by UCT researchers or by outside visiting researchers
- to be aware that research questionnaires involving human subjects have ethical dimensions, and that research involving staff or student perceptions of race, identity or ethnicity also have ethical dimensions
- to report all instances of unethical or improper research practice to the Dean for referral to the Chair of the University Research Committee.

At the time of first registration, the supervisor will have had to sign a statement in the MoU relating to the need for any ethical clearance required for a student's research.

A particular (and unfortunately growing) ethical issue is that of plagiarism. Plagiarism, in essence, is passing off someone else's work as your own: it results from inadequately acknowledging sources of data, analyses and ideas, and includes direct copying of passages of text. It is dishonest and it has no place at a university. If students are in any doubt on issues relating to plagiarism, they must consult their supervisor or the Ethics Committee. Instances of plagiarism will be taken to the University Court and may have very serious consequences, including rustication or even expulsion.

All Masters candidates, at the time of submission, are required to make a declaration, which should be included in the dissertation stating: "I know the

meaning of plagiarism and declare that all of the work in the document, save for that which is properly acknowledged, is my own”.

The PhD declaration is discussed in the next section.

If in any doubt regarding ethical issues relating to research, seek advice from your supervisor or Head of Department.

12. SUBMISSION OF A THESIS / DISSERTATION

12.1 Timing and process of submission

At the conclusion of research, the candidate must submit a dissertation or thesis for examination. This normally occurs after receiving an indication from the supervisor that the product is in a form which is acceptable for submission. However, a candidate is not prevented from submitting without the supervisor's approval.

If a candidate intends submitting a Masters dissertation for examination he/she must inform the Head of Department in writing, with a copy to the Dean, of such an intention two weeks in advance of planned submission date. The Head of Department, with input from the supervisor, will then nominate suitable examiners for approval by the Dean. If submitting a PhD thesis, the candidate must inform the Doctoral Degrees Board Officer (Bremner Building) in writing of such intention one month prior to planned submission.

The dates for submission of dissertations and theses are:

- **Third week in February** for persons hoping to graduate in June;
- **Third week in August** for persons hoping to graduate in December

Please refer to the University Fees Booklet for submission dates with respect to fee rebates.

Candidates who submit their thesis/dissertation before the beginning of the start of the first term are not required to register. If submitted after the start of the first term a candidate must register for that year, and a pro-rata fee will be charged, depending on the date of submission. Where a student who submitted prior to the start of term is required to revise and resubmit a dissertation/thesis, they must register and pay the academic fee for that year. Further information can be found at www.uct.ac.za/students/postgraduates/fees/handbook/

12.2 Format

There is no standard format for the submission of a dissertation or thesis: formatting is at the candidate's discretion, but using A4 paper is the expected norm. Reasonable width margins (2 - 2.5 cm) are desirable to ensure that binding does not impede reading of the text. However, candidates should consult their supervisor early on in the process. The contents must be printed in either double

or one and a half spacing using a common font throughout. Printing on both sides of the page is allowed, but a reasonable weight paper must then be used. Although it is expected that the dissertation/thesis be written in English, it is possible with prior support of the supervisor and prior permission from the Doctoral Degrees Board, to submit a PhD in another language.

It is acceptable for a Masters dissertation or PhD thesis to include published papers, provided that:

- where published papers are included as separate chapters, the dissertation/thesis must nonetheless show acceptable academic style, constant formatting, scholarly content and coherence as a connected account with a satisfactory general introduction, statement of thesis and a final discussion chapter. The latter should not duplicate material that is already contained in the discussion sections of the various chapters/papers, but integrate the results from the various chapters and place them in a broader context;
- where multi-authored papers are included, the contribution of the candidate can be distinguished and is clearly stated; and
- in the case of PhDs the candidate's plan to include published papers has had the annual written support of the Dean and the written approval of the Doctoral Degrees Board prior to submission (see DDB rules for further details).

For Masters degrees a candidate must submit either three hard copies (degree by dissertation only) or two hard copies (degree by coursework plus dissertation) of the dissertation in temporary binding to the Postgraduate Officer in the Science Faculty Office. Once the dissertation has been finally accepted, two unbound copies and one electronic copy (in pdf format) of the final, corrected, dissertation must be lodged with the Faculty Office.

For a PhD, a candidate must submit three copies of the thesis in temporary binding for the examiners and one unbound and one electronic copy (in pdf format) of the thesis for the library to the Doctoral Degrees Board Officer.

12.3 **Length**

In the case of a PhD, the thesis may not exceed 80,000 words. If it is felt that it is essential to exceed this length, special permission must be obtained from the Dean. It is the expectation that Masters degrees should be substantially shorter than this with a maximum of 50,000 words allowed; on the order of 35,000 words (~100 pages) would be the expected norm.

12.4 **Title Page**

There must be a title page on which should appear the thesis title, name of candidate (plus qualifications if you wish), name of Department, University and the month and year of submission. The following is the recommended wording used after the thesis title and name of the candidate:

Thesis presented for the degree of Master of Science or Doctor of
Philosophy
In the Department of ...
University of Cape Town
Month and Year

12.5 **Publication**

When a candidate submits a thesis he/she shall be deemed to have granted the University free license to publish it in whole or part in any format the University deems fit.

12.6 **Declaration of Free Licence**

In the case of PhD students, the candidate is required to sign a declaration stating:

" I hereby:

- (a) grant the University free license to reproduce the above thesis in whole or in part, for the purpose of research;
- (b) declare that:
 - (i) the above thesis is my own unaided work, both in conception and execution, and that apart from the normal guidance of my supervisor, I have received no assistance apart from that stated below;
 - (ii) except as stated below, neither the substance nor any part of the thesis has been submitted in the past, nor is being, nor is to be submitted for a degree at this University or any other University.
 - (iii) I am now presenting the thesis for examination for the Degree of PhD.

12.7 **Referencing**

Forms of referencing must be standard for the discipline and must adhere to a recognised international convention, agreed to with the supervisor.

13. **EXAMINATION**

13.1 **Overview**

The system of independent external examination lies at the heart of credible quality assurance. The examination of full Masters dissertations involves three examiners, one internal and two external to UCT (at least one of whom must be at an institution of high academic standing outside of South Africa). The examination of dissertations associated with a coursework Masters is by two examiners – one internal, one external to UCT. The examiners are selected on the basis of their knowledge in the field within which the research is located. Appointments of examiners of Masters dissertations are subject to approval by the Dean. Supervisors cannot serve as examiners of their own student's work.

At the Doctoral level, the thesis is examined by three external experts in the field, at least two of whom are based at an institution of high academic standing outside of South Africa. Appointments of examiners of PhD theses are subject to the approval by the Doctoral Degrees Board.

In all cases, the identity of the examiners is kept strictly confidential from the student. This confidentiality remains in force until the examiners give permission for their identities to be known after the examination process has run its full course (and the examiners have the right not to give this permission). No dissertation or thesis will be examined under conditions of secrecy.

13.2 **What is expected of a Masters dissertation**

In order for the degree to be awarded, a Masters dissertation must indicate that a candidate has successfully completed a programme of training in research in that he/she:

- understands the nature, objectives and scientific principles underlying the investigation
- is adequately acquainted with the relevant literature
- has mastered appropriate techniques and analytical methods
- assesses the significance of findings in a thorough and logically-coherent manner
- reports on the study in an acceptable scientific format (in accordance with Faculty rules and norms) that is satisfactory in both presentation and literary style.

A Masters degree is essentially a training course to equip a candidate with skills necessary either for employment in a given field, or for further independent research. Consequently, the dissertation need not involve original research, distinctly advance knowledge of the subject or be potentially publishable in a peer-reviewed scientific journal. To obtain a distinction for the degree, these factors are considered together with evidence of critical and independent thought. It is important to note that MSc degrees are awarded with distinction in exceptional cases only. Usually a unanimous decision from all three examiners is required but a distinction may be awarded by the Masters Degree Committee if two examiners recommend this and the third examiner does not object. Examiners are asked to clearly indicate their recommendation, and to provide a detailed report in which they comment on the strengths and weaknesses of the dissertation. The detailed comments in the examiners' reports are integral to the final decision on whether to award a distinction or not, and are particularly relevant when all three examiners are not unanimous.

To recommend that the degree be awarded with distinction, the examiner must be of the opinion that the work is outstanding at the Masters level, bearing in mind the methodological complexities involved, and the intellectual difficulty of the particular subject matter. As a guideline, it is suggested to examiners that

they might consider a dissertation to be worthy of a distinction if it fulfils the following criteria:

- the standard is in the top 20%, approximately, of the Masters dissertations that they have examined
- the structure of the dissertation is appropriate
- presentation is excellent. Minor editorial errors (such as formatting, grammatical or spelling mistakes) may be tolerated and referred back to the candidate for correction. Ubiquitous and careless errors in presentation that point to a lack of exactitude should militate against the award of a distinction.

Where the work reported in the dissertation is original and directly contributes to knowledge in, or an understanding of, the subject and/or is potentially publishable as a refereed international paper in the field, this should play a part in the decision. However, publication of results contained in one or more chapters of the dissertation prior to submission is neither in itself sufficient nor necessary to gain a distinction, as it is the submitted MSc dissertation that is examined and on which a decision of a distinction will be based. Publications arising from the work subsequent to submission are, for obvious reasons, not considered.

13.3 **Assessment of examiners' reports**

Examiners of Masters dissertations and PhD theses are asked to recommend one of the following outcomes:

- (A) that the dissertation/thesis be passed without the need for corrections and the degree be awarded;
- (B) that the dissertation/thesis be passed and the degree be awarded only after specified changes have been made to the text of the dissertation;
- (C) that the dissertation/thesis is unsatisfactory and should be substantially revised and resubmitted for examination;
- (D) that the dissertation/thesis be rejected, and the degree be not awarded.

In addition, in the case of a Masters dissertation, the examiners are asked to clearly indicate if a distinction should be awarded, or whether or not the examiner would object to the award of a distinction should the other examiners so recommend. Distinctions are not awarded to PhD theses.

In the case of Masters degrees, the examiners' reports are submitted to the Head of Department who writes a consolidated report, taking all examiners' comments into account. He/she makes a recommendation to the Dean on the outcome of the examination process in terms of categories A, B, C or D above, and whether a distinction should be awarded or not. Normally, to receive a distinction, all three examiners need to be unanimous in their recommendation. The Dean, in consultation with the Masters Degree Committee, will then make the final

decision on the outcome. In the case of Doctoral degrees, the reports are received by a Committee of Assessors, chaired by the Dean, who evaluate the reports and recommend a result (categories A, B, C, or D – see above) to the Doctoral Degrees Board who makes the final decision.

In the case of Masters by coursework and dissertation, to obtain the degree with distinction, a candidate must obtain a distinction in each of the coursework and dissertation components. Likewise, both components must be separately passed to achieve an overall pass.

After a decision is reached, the Faculty Office (Masters) or Doctoral Degrees Board (PhD) sends a letter to the candidate, the Head of Department and the supervisor informing them of the outcome.

Where improvements and corrections are required, the student must consult with the supervisor for advice on what needs to be done. It is the responsibility of the supervisor and the Head of Department and, in the case of Masters dissertations, the Dean to sign off on these once the candidate has completed the necessary revisions. Such corrections should be completed within six months (Masters) or one year (PhD) of notification. *It is important to note that in the event of a C result, the candidate has only one chance of resubmission, i.e. option C is not available in the re-examination.*

Once a decision is taken to award the degree, copies of the dissertation/thesis are lodged on the open shelves of the library.

14. ISSUES RELATING TO INTELLECTUAL OWNERSHIP

14.1 Secrecy Conditions

A thesis or dissertation accepted by the University for a higher degree may not be subject to secrecy restrictions of any kind. Any thesis or dissertation approved for a higher degree is placed on the open shelves of the Library. In exceptional cases, should a moratorium on publication of results have been agreed to, the dissertation/thesis will remain unexamined until the end of the moratorium period.

14.2 Copyright

The University recognises the rights of those who have ownership of copyright. Members of the University are explicitly prohibited from infringing copyright, either in terms of publications or software.

A candidate may, subject to prior approval of his/her supervisor, publish part or the whole of the work done under supervision for the degree before presenting it for the examination. Copyright rests with the author. However, no publication

may, without the consent of Senate, contain a statement that the published material was, or is to be, submitted in part or in full requirement for the degree.

Further, when presenting a dissertation or thesis, the candidate is deemed, by doing so, to be granting the University free licence to publish it in whole or in part, in any format that the University deems fit.

14.3 **Patents**

This is a complex issue and is governed by University rules and guidelines. Students wishing to pursue it should consult with their supervisor(s) and the Department for Research and Development.

15. **JOINT PUBLICATION**

It is common practice for joint publications between the candidate and the supervisor to be generated through the research process. There are differing conventions across the Faculty about the ordering of authors. This should be clarified and jointly agreed between the student and the supervisor early in the research process.

16. **INCORPORATION OF STUDENTS INTO THE LIFE OF THE FACULTY**

Postgraduate students are formally incorporated into the life of the Faculty through the following structures: -

16.1 **The Science Postgraduate Students' Association (SPGSA)**

Postgraduate students have a representative forum in the form of the Science Postgraduate Students' Association. This body comprises one representative from each of the 13 Science Faculty Departments, elected by their fellow postgraduates. The Deputy Dean charged with postgraduate affairs is an *ex officio* member. The Chair of the Science Postgraduate Students' Association represents Science Faculty postgraduate students on a number of University-wide committees. The Science PGSA also plays an important social role.

16.2 **The Dean's Advisory Committee and Science Faculty Board**

Postgraduate students are represented, via the Postgraduate Students' Association, on the two main decision making bodies of the Faculty, viz. the Dean's Advisory Committee (a committee of the Dean, Deputy Deans, HoD's and Programme Convenors) and the Science Faculty Board.

16.3 **The Faculty Executive Committee**

The Deputy Dean who is *ex officio* member of the Science PGSA serves on the Faculty Executive Committee which meets every week and allows for timeous action on postgraduate matters when necessary.

16.4 **Orientation**

An orientation event is held annually, at which postgraduate students are addressed on issues such as rights and responsibilities, administrative issues, institutional relationships, financing and so on. It is typically held in April/May, and is hosted by the Deputy Vice-Chancellor responsible for research and is open to all postgraduate students at UCT.

17. **INCORPORATION OF STUDENTS INTO THE LIFE OF THE UNIVERSITY**

The University has a Board for Graduate Studies, chaired by a Deputy Vice-Chancellor. All Faculties are represented on this body by both staff and a student representative. This Board is charged with improving the postgraduate educational experience within the University at large. In addition, a University Postgraduate Student Association looks after the interests of UCT postgraduate students in general, and a Postgraduate Student Centre has been opened on the Upper Campus. The Centre is intended to be a place for formal and informal contact between postgraduate students across all Faculties. It contains workshop and meeting facilities, computers for word processing, newspapers and magazines and is a potential venue for postgraduate social functions.

18. **POST-DOCTORAL FELLOWS**

For administrative purposes, to facilitate access to the various services on the campus, post-doctoral fellows are registered on the University's student system. This is done through the Postgraduate Centre in the Otto Beit Building. However, it is the Science Faculty's belief that post-doctoral students should be considered equivalent to members of staff and be incorporated into the intellectual and social life of departments.



APPENDIX A

UNIVERSITY OF CAPE TOWN

Faculty of Science

Memorandum of understanding

between

graduate student and supervisor

This memorandum of understanding between

.....(name of graduate student)

.....(signature)

.....(date)

and

.....(name of supervisor)

.....(signature)

.....(date)

is designed to ensure that the supervision experience is as mutually productive as possible.

(This form must be completed at the time of initial registration; an annual **‘Progress & Planned Activity’** report must be completed each subsequent year before the student renews his/her registration)

Candidate details:

A1 Name of Candidate: _____ Student number: _____

A2 Highest academic qualification: _____

A3 Degree registered for: MSc ____ PhD ____ Year of first registration: _____

A4 Project title and proposal: (attach proposal separately):

.....
.....
.....

The supervision arrangements:

General obligations of supervisors are outlined in section 9.3. By signing this document, both parties acknowledge their understanding of the general expectations it contains.

B1 Supervisor:

(a) Initials & surname:

(b) Staff no:.....

(c) Department:.....

B2 Co-supervisor(s) if any:

(a) Initials & surname:.....

Department:.....

Institution:.....

Responsibilities:.....

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(b) Initials& surname:.....

Department:.....

Institution:.....

Responsibilities:.....

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Outline of expectations and commitments:

C1 In free format or point form provide an outline of expectations set out in as much detail as possible to the satisfaction of supervisor and candidate (use separate pages if necessary).

Research expectations: (*laboratory access; field work; access to equipment; courses to attend; conference attendance; seminar presentations*).....

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Supervisor/student commitments (*access to supervisor; annual leave for student; working hours; data ownership; patents¹*).....
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Financial support: (*stipend; research costs; conference and travel, etc*):
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Ethical Clearance (this section must be signed off)

I hereby confirm that the ethical clearance required for this research has been obtained or that none is necessary.

Supervisor's signature: _____

Declaration by Head of Department

I have reviewed this completed MoU and I am satisfied that the Department is able to meet the obligations to the candidate as set out in this MoU:

Signed:.....

Name:.....

¹ See Post Graduate Handbook for UCT's IP policy

Date:.....

I approve registration of the candidate in the Faculty of Science:

Dean/Deputy Dean

Signed:.....

Name:.....

Date:.....

APPENDIX B

Faculty of Science

Postgraduate Progress and Planned

Activity Report Form



(To be completed by returning MSc and PhD candidates and commented on, and agreed to, by supervisor)

Student Name: **Student number:**

Thesis/dissertation title.....
.....

Degree: **Year of first registration for this degree:**

Expected year of completion:

Number of years registered for this degree:

Date:

1. Summarise progress during previous year: *(to be completed by candidate)*

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2. Comment by supervisor:

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3. Planned activities and agreed expectations for the year: *(in point form indicate objectives and agreements for the year ahead such as: chapters to be completed; publications; experiments; field work; analytical work; conference attendance/presentations; seminar attendance/presentations; working hours; supervisor contact; leave; etc.*

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6. Response by supervisor:

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Signed by:-

Candidate: **Date:**

Supervisor: **Date:**

Head of Department: **Date:**

Motivation required from HoD/supervisor if candidate has been registered for more than 3 years (MSc) or 4 years (PhD):
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I approve/refuse renewal of registration for the year ahead:

..... (Dean/Deputy Dean)

Date: