



RESEARCH & POSTGRADUATE SUPPORT



POSTGRADUATE
STUDENT GUIDE

2014

 **DUT**
DURBAN
UNIVERSITY OF
TECHNOLOGY





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Abbreviations

BTech	Bachelor of Technology degree
DTech	Doctor of Technology degree
DUT	Durban University of Technology
FRC	Faculty Research Committee
HDC	Higher Degrees Committee
HoD	Head of Department
MTech	Master of Technology degree
NRF	National Research Foundation
PGSF	Postgraduate Students' Forum
RPS	Research and Postgraduate Support
UoT	University of Technology

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CRITICAL PATH FOR POSTGRADUATE QUALIFICATIONS (This is contained in more detail in the text of the Guide.)	
STUDENT'S RESPONSIBILITIES	UNIVERSITY'S RESPONSIBILITIES
1. APPLICATION AND REGISTRATION FOR HIGHER DEGREE	
The prospective student approaches the HoD with a proposed research topic and Supervisor (if available) and completes form PG1 (<i>Notification of Proposed Research Topic and Supervisor</i>) together with the HoD. The prospective student completes the registration form and submits it, together with form PG 1 and all supporting documents, to the Faculty Office. See section 3.1 for further information.	The Faculty Office processes the prospective student's registration and retains form PG1 on record after it has been noted by the FRC and signed by the Executive Dean/FRC Chair. <i>The HoD is to update form PG1 if/as needed (e.g. when appointment of Supervisor occurs).</i>
2. APPOINTMENT OF SUPERVISOR	
The student may accept the nominated Supervisor or request another person.	The HoD appoints a suitable Supervisor, and updates form PG 1 if/as necessary. Note: The approval process is faculty specific.
3. CONTRACT AGREEMENT BETWEEN STUDENT AND SUPERVISOR	
The student negotiates a contract with the Supervisor, which is included on form PG1.	The Supervisor completes (or updates) form PG1, and the appointment is noted at the FRC.
4. SUBMISSION OF RESEARCH PROPOSAL TO FRC	
The student submits a Research Proposal to the Supervisor on forms PG4a and PG4b (<i>Research Proposal and Ratification of Research Proposal by the Higher Degrees Committee; Research Ethics Checklist</i>) and prepares the Research Budget ¹ , which can be accessed after approval by the FRC ¹ . If the FRC decides that further ethics clearance is necessary, the student attaches the documents required by the Institutional Research Ethics Committee (IREC) to the proposal in preparation for submission to IREC. ¹ Or after IREC approval, if this is required.	The <i>Checklist and Evaluation of Research Proposal</i> section of PG4a must be completed and signed by a suitably qualified Reviewer prior to submission of the proposal to the FRC. The Supervisor then signs forms PG4a and PG4b and submits these via the HoD to the FRC. The FRC decides whether further ethics clearance is necessary, and, if so, informs the student, who submits the proposal with all necessary attachments to IREC. A section of PG4a (pages1-2/3) serves before the HDC for ratification.
5. SUPERVISOR AND STUDENT PROGRESS REPORTS	
The student completes an annual progress report on form PG5a (<i>Annual Progress Report: Student</i>) and submits it via the HoD to the FRC.	The Supervisor completes an annual progress report on form PG5b (<i>Annual Progress Report: Supervisor</i>) and submits it via the HoD to the FRC.
6. INTERRUPTION/EXTENSION/TERMINATION OF STUDIES	
In the case of unavoidable interruptions/delays or requests for extension or termination of studies, the student must complete PG6 (<i>Application for Interruption/Extension/Termination of Studies</i>).	The Supervisor checks completed form PG6 and submits it via the HoD to Faculty Board.

7. NOTIFICATION OF INTENTION TO SUBMIT THESIS/DISSERTATION FOR EXAMINATION	
The student submits PG7 (<i>Notice of Intention to Submit Dissertation/Thesis for Examination</i>) to the HoD <i>at least 3 months in advance</i> of the intended date of exam submission of the dissertation/thesis.	The HoD, in consultation with the Supervisor, should identify suitably qualified Examiners <i>at least 3 months in advance</i> of the anticipated submission date. The HoD is to forward PG7 to the Faculty Office.
8. NOMINATION OF EXAMINERS	
	The HoD, in consultation with the Supervisor, submits names of suitable Examiners to the FRC for approval on form PG8 (<i>Nomination of Examiners</i>).
9. SUBMISSION OF DISSERTATION/THESIS FOR EXAMINATION	
Once the dissertation/thesis is ready for examination, the student presents the requisite number of soft bound copies to the Supervisor for approval and signature, and ensures that these are delivered to the Faculty Office. A receipt is issued on delivery, showing the date of submission.	Once the Supervisor has approved and signed examination copies of the dissertation/ thesis, PG9 (<i>Submission of Dissertation/Thesis for Examination</i>) is signed by the Supervisor and HoD and sent to the Faculty Office, authorising the posting of the examination copies to the Examiners.
10. EXAMINATION OF DISSERTATION/THESIS	
	The Faculty Office records student and Supervisor details on PG10 (<i>Examination of Dissertation/Thesis</i>) and posts examination copies of the dissertation/thesis together with PG10 and requisite documents to the Examiners. The Faculty Office ensures that all items posted are delivered to the Examiners and that the Examiners are paid timeously for their work.
11. EXAMINATION RESULTS	
The student may not see the Examiners' reports until after HDC approval, but may undertake any amendments as may be recommended by examiners before submitting the prescribed number of print and electronic Library copies to the Faculty Office.	The HoD, via the FRC, submits Examiners' results and recommendations to the HDC for approval on PG10 and PG11 (<i>Submission of Final Marks for Masters Dissertation/Doctoral Thesis to Higher Degrees Committee</i>).The Faculty Office notifies the student of the decision after HDC approval.
12. SUBMISSION OF LIBRARY COPIES OF DISSERTATION/THESIS	
The student completes and signs PG12 (<i>Declaration in respect of Masters Dissertation/ Doctoral Thesis submitted for Examination</i>) to confirm that all amendments required by the Examiners have been done, and forwards it to the Supervisor. The student then submits the prescribed number of print and electronic Library copies of the dissertation/ thesis to the Faculty Office. A receipt is issued on delivery, showing the date of submission.	PG12 is signed by the Supervisor after checking that all amendments to the dissertation/thesis have been satisfactorily completed, and then by the HoD, who forwards PG12 to the Faculty Office, thus completing the Examination Process.
GRADUATION – CONGRATULATIONS!	

1 PREFACE

The purpose of this Postgraduate Student Guide is to provide generic guidelines to you as a Masters or Doctoral student and your supervisors, as well as to provide useful information for BTech students, as prospective MTech students. This Guide sets out the procedures which you, as a postgraduate student, need to follow. It brings together the University rules, the various requirements of the Higher Degrees Committee and Senate, as well as matters relating to the preparation of the final dissertation/thesis. This Guide does not purport to cover every aspect of higher degree study, and some alternate references are given at appropriate times in the Guide.

Comments or suggestions for the improvement of this Guide are welcome. Please forward any comments or suggestions to Research and Postgraduate Support – see our contact details on the inside front cover.

See the Research and Postgraduate Support webpage at <http://research.dut.ac.za>.

2 POSTGRADUATE STUDIES

2.1 Higher degrees at the University

Depending upon your starting qualifications, you may register for an appropriate full research **Master of Technology (MTech)** degree, which requires a completed dissertation, or the degree of **Doctor of Technology (DTech)** which will require the completion of a thesis. Masters and Doctoral students' research and dissertations are overseen by a *supervisor*.

You must demonstrate that you understand the purpose of your research and that you have developed (or adapted) and used appropriate methodologies or techniques. In addition, DTech students must demonstrate novelty in their research findings, which should contribute to *new* knowledge.

2.2 What you must do to be awarded a higher degree qualification

Senate has set the following guidelines for the award of higher degrees by dissertation/thesis:

A dissertation for the degree of **Master of Technology** must show that you have the following:

- A comprehensive knowledge base in a discipline/field and a depth of knowledge in some areas of specialisation.
- A coherent and critical understanding of the principles and theories of a discipline/field; the ability to critique objectively current research and scholarship in an area of specialisation; the ability to make sound judgements based on evidence; and the ability to apply knowledge.
- An understanding of research methods, techniques and technologies and an ability to select these appropriately for a particular research problem in an area of specialisation.
- The ability to identify, analyse and deal with complex and/or real world problems/challenges/issues using evidence-based solutions and arguments.
- Efficient and effective information retrieval and processing skills; the identification, critical analysis, synthesis and independent evaluation of quantitative and/or qualitative data; and the ability to engage with current research and scholarly or professional literature in a discipline/field.
- The ability to present and communicate academic work effectively and professionally.
- The capacity to demonstrate personal responsibility and initiative.
- The capacity to conduct research professionally and ethically.

A thesis for the degree of **Doctor of Technology** must show that you have the following:

- A comprehensive knowledge base in a discipline/field with expertise and specialist knowledge in an area at the forefront of the discipline, field or professional practice.
- A critical understanding of research methodologies, techniques and technologies in a discipline/field; the ability to participate in scholarly debates at the cutting edge of an area of specialisation; and the ability to apply knowledge, theory and research methods creatively to complex practical, theoretical and/or real world problems.
- Substantial, independent research and advanced scholarship resulting in the (re) interpretation and expansion of knowledge.
- Advanced information retrieval and processing skills; the ability to undertake independently a study and evaluation of the literature and current research in an area of specialisation.
- The ability to present and communicate the results of his/her research and opinions effectively and professionally to specialist and non-specialist audiences using the full resources of an academic/professional discourse, as well as the ability to compile a thesis which meets international standards of scholarly/professional writing.
- Intellectual independence and research leadership through managing advanced research and development in a field professionally and ethically.
- The capacity to evaluate one's own and others' work critically on the basis of independent criteria.
- The capacity to make a new contribution to the existing knowledge base within a specific field/discipline.

3 YOUR LIFE AS A POSTGRADUATE STUDENT

There are a number of steps leading to the attainment of a higher research degree (note that there are some programmes in which it is possible to undertake a Masters degree by coursework. This guide deals only with full research options.

3.1 Application and registration

If you wish to undertake a Masters or Doctoral study at the University, you have two points of enquiry:

- contact the relevant Head of Department if you know your field of study, or
- contact the Research and Postgraduate Office for guidance as to the relevant Head of Department, depending on your previous qualifications and interests.

You then complete and submit a PG1 form and supporting documentation to the HoD for consideration, and if the HoD is satisfied that the you are a suitable student for higher degree study in that programme, that the proposed research topic is viable, and that the Department can provide or facilitate adequate supervision and facilities, you complete registration through the relevant Faculty Office.

Once you have been registered you may commence your studies. New students may register at any time throughout the year, but registration after 31st March will mean that this year is not counted as part of the minimum duration of your degree, as stipulated in Rule G25(2)(a).

Once registration has been completed the clock starts ticking – for a Masters degree the expected completion time is within two years, and for a Doctoral degree three years.

You must re-register each year until the completion of your degree. The closing date for **re-registering** Masters and Doctoral students is the last working day in March. **Failure to re-register before the last working day in March might require you to re-apply for admission to the degree.** Re-registration requires the submission of progress reports by both your supervisor and yourself (**i.e. before the end of the previous year**).

In terms of the University rules:

A student registering formally for the first time for a **Masters degree** must do so on or before the last working day in March, in order for the current academic year to count towards the minimum duration referred to in Rule G24(2)(a). Such a student may register at any stage after this date but will then also be required to re-register for the whole of the next academic year in order to comply with Rule G24(2)(a). The prescribed full fee is payable whenever a student first registers and the prescribed re-registration fee is payable for every subsequent year for which the student is permitted to continue with the requisite research. **No late registration penalty fee is levied.**

A student registering formally for the first time for a **Doctoral Degree** must do so on or before the last working day of the University in March, in order for the current academic year to count towards the minimum duration referred to in Rule G25(2)(a). Such a student may register at any stage after this date, but will then also be required to re-register for the whole of the next two consecutive years in order to comply with Rule G25(2)(a).

Timeframes for completion of your degree



The minimum time to complete a **Masters degree** is one year of formal registered study and the maximum period allowed is three years. If you do not obtain your Masters degree within three years after first formally registering for the qualification, Senate may refuse to renew your registration or may impose any conditions it deems fit. You may apply to the Faculty Board for an extension of your studies if necessary.

For a **Doctoral degree**, the minimum duration is two years of formal registered study and the maximum period allowed is four years. If you do not obtain your Doctoral degree within four years after first formally registering for the qualification, Senate may refuse to renew your registration or may impose any conditions it deems fit. You may apply to the Faculty Board for an extension, if necessary.

Progress

It is a University rule that you and your supervisor are required to submit an annual progress report (PG5a and PG5b forms) to the HoD at the end of each year detailing progress in your research project. You are not allowed to re-register until such forms have been submitted. These reports are considered by the Executive Dean of the relevant faculty who brings any problems to the attention of the supervisor/Head of Department/Director of Research and Postgraduate Support.

Interruption of studies

Note: the required registration period does not include any period of suspension of registration.

Should there be *bona fide* reasons for a break of a year or more once you are formally registered, you may apply for a suspension of registration. Your registration may be suspended only under **exceptional circumstances**, and is rarely done retrospectively. You must apply on form PG6 to the Head of Department and approval is subject to the HoD's recommendation and that of the Executive Dean, as well as the approval of the Faculty Board. You must consider any obligation to sponsors when considering suspension of registration.

3.2 Your research proposal

Once you have registered and your supervisor has been allocated, you will be able to begin working towards your research proposal. Your proposal must be submitted on forms PG4a and PG4b for approval by your supervisor and the Head of Department. Your research proposal is then approved by the relevant Faculty Research Committee and ratified by the Higher Degrees Committee. Depending on the level of Ethics Clearance involved, **the proposal may also need to be approved by the Institutional Research Ethics Committee (IREC)**. On approving your proposal, **the FRC will decide whether IREC approval is necessary**, and, if so,

will instruct you to make a submission to IREC for ethics clearance (see http://www.dut.ac.za/research/institutional_research_ethics for details of the submission).

Forms PG4a and PG4b are used for submitting your Research Proposal. The Research Proposal should not be more than 20 pages in entirety (i.e. including attachments), unless Ethics Clearance at level 3 or 4 is required.

Copies of all PG forms are posted on the DUT student and staff portals.

PG4a

1. Field of Research and Provisional Title

In this section you should provide the field of research and the provisional title of the research project, with a brief description, if the title is not self-explanatory. This is a provisional working title. The title should be descriptive enough to inform the reader what the research is about. There are a number of conventions regarding the title:

- Use only sentence case (i.e. The only words to have an initial capital letter are the first word of the title and any proper nouns);
- Do not use any abbreviations in the title (i.e. all words must be in full);
- Do not use any acronyms in the title.

2. Context of the Research

This section should provide the general information regarding the research that will be undertaken and should make it clear why the problem is worth addressing. You should sketch the background and, where appropriate, should provide a brief theoretical framework within which the problem is to be addressed. You should address the questions: What motivates the research? Why is it being undertaken? How will the results add to the body of knowledge? Where research arises out of problems encountered in personal, social, economic, historical, political or literary contexts, these problems should be briefly stated.

3. Research Problem and Aims

This section should either set out the specific question(s) to which you hope to find an answer, or the research problem which is to be solved. In the case of open-ended topics, it should outline the subject/area/field to be critically investigated. It should indicate clearly what the aims of your research are.

4. Literature Review

This section includes a brief review of the main seminal literature sources (mainly scholarly journals, but text books, media articles, Internet and other sources can be used). Use the Harvard Method of referencing (see more about this later). Show clearly how the literature is linked to your topic, the problem statement and the research objectives.



5. Research Methodology

In this section you state the research paradigm; qualitative/quantitative or both. The research approach/strategy will also need to be stated. For example:

Qualitative: Action research, developmental research, case study research, ethnographic research, grounded theory research, etc.

Quantitative: Mathematical, modelling and simulation, experimenting, testing, etc.

6. Plan of Research Activities

In this section you should provide a summarised work plan for each year of the project, giving information for each research activity per year, under the following headings:

- Activity
- Timeframes (target dates for the duration of the project)

7. Structure of Dissertation / Thesis Chapters

In this section you should briefly state the proposed content of each chapter in one clear sentence per chapter.

8. Potential outputs

In this section you should provide details on envisaged measurable outputs (e.g. publications, patents, students, etc.)

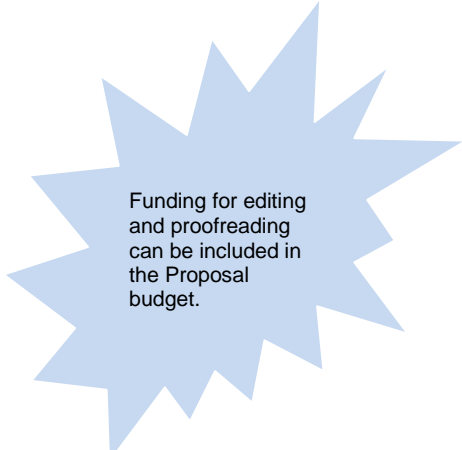
- Expected national and/or international acclaim for the research and contribution of research outputs to building the knowledge base;
- Exploitability of outputs, e.g. applicability to community development, improved products, processes, services in SA, region and/or continent;
- Expected effects of research results.

9. Key references

In this section you should list a maximum of 20 key references which have been cited in the above sections using the Harvard or IEEE referencing style. Consult the latest reference guide available through the DUT Library for guidelines on the Harvard referencing style. A version of the DUT referencing style is available on the EndNote program, which can be downloaded from the DUT Library website.

After these sections there is a section on Ethics, followed by declarations by:

- The student
- The supervisor
- The HoD



Funding for editing and proofreading can be included in the Proposal budget.

Before submission to the FRC, the HoD will have your proposal checked and approved by a suitably qualified reviewer (which must *not* be your supervisor or co-supervisor).

PG4b

This is the Research Ethics Checklist, which must be completed, signed and attached to form PG4a. A letter of Information and Consent must also be attached, if required. In the case of Ethics Clearance being required by the FRC, the following will need to be submitted to IREC:

- 1) Completed DUT approved format for proposal submission ensuring the following are addressed:
 - Participant recruitment procedures
 - Safety information
 - Any payment or compensation to participants
 - Ethical checklist
- 2) Letter of information and consent (Appendix A)
- 3) Conflict of interest form (Appendix B)
- 4) Other information being supplied to participants
- 5) Other documentation necessary for the IREC to make an informed decision regarding the research

The IREC administrator will accept research for ethical review on a rolling basis. However, it should be received a minimum of 10 days prior to the IREC meeting. A proposal that is scientifically and ethically sound should have an average turnaround time of 30 days. The IREC administrator will check the application, ensuring that all relevant documentation has been submitted. Should documentation be missing, it will be requested.

Submission of research proposal to the HDC for ratification of the proposal and budget

The combined PG4a and PG4b forms (with any necessary attachments) are signed by the Chair of the Faculty Research Committee once the proposal has been approved by the FRC. The first 2/3 pages are then detached by the HoD and submitted to the HDC for ratification of your proposal.

3.3 You and your supervisor

General principles

- The HoD approves the appointment of a supervisor and one or more co-supervisor(s), for each postgraduate student (included on form PG1);
- The supervisor/s appointed must be to *your satisfaction* as you will be working together in a close relationship. It would therefore be counterproductive to DUT's research agenda should you be dissatisfied with the supervisor/s and vice versa;
- The roles to be played by supervisor/s and yourself should be made as clear as possible and should preferably be arrived at through a process of mutual consensus (see guidelines below);
- The supervisory process should be documented so that there is a clear record of responsibilities, and whether or not these responsibilities have been complied with;
- You and your supervisor/s must negotiate a Contract Agreement relevant to the work and conditions involved in completing this particular higher degree, and document this on form PG1. This is signed by supervisor/s and yourself and submitted to FRC for noting;
- Supervisor/s may choose to record the supervisory process in whatever form most suits the disciplinary context. Access to the records must be provided to you on a regular basis. The record should be signed by both yourself and your supervisor/s to indicate agreement with its contents;
- In the case of a Masters degree, at least one of the supervisors must have a doctorate (the doctorate may not be in the same discipline, but nevertheless serves to indicate expertise in the research process);
- In the case of a Doctoral degree both the supervisors must have doctorates. The co-supervisor may be the expert in the field and may be external to the University;
- At least one of the two must have expert knowledge in the field/discipline, and one must give guidance on the research process;
- An external co-supervisor can be national or international;
- Preference should be given to supervisors at other Universities of Technology (UoTs) and Universities of Applied Science;
- The co-supervisor may be an expert from industry/a company if none is available at DUT or other academic institutions;
- Both supervisors may be external if none is available at DUT;
- Exceptions to the above may be considered in discussion with the Director of Research and Postgraduate Support.

Your responsibilities in the supervisory relationship

Remember that the appointment of the supervisor must be to the *satisfaction of the student*.

Before the project begins it is your responsibility:

- To be fully informed about the degree requirements and procedures at the University;
- To discuss with your supervisor/s the relevant responsibilities of each party, as set out below;

- To ensure that the proposed research project will not duplicate previous research;
- To arrange financial support for the project, where appropriate, and pay the required fees;
- To be willing to work with your supervisor/s;
- To sign confidentiality agreements where appropriate to the project concerned;
- To comply with the University's Policy on Plagiarism; and
- To comply with the procedures for Referencing (referencing guide and EndNote software are available from the DUT Library and the DUT Library website).

During the **course of the project** it is your responsibility:

- To maintain a professional attitude to, and relationship with, your supervisor/s sponsors and any other members of the research group;
- To negotiate with your supervisor/s mutually acceptable arrangements regarding the sequence of tasks to be undertaken, target dates, submission of work for scrutiny and the schedule of meetings between supervisor and yourself;
- To meet obligations made during the supervisory contact;
- To make positive suggestions to your supervisor about the next stage of the work;
- To become familiar with the relevant literature in the field;
- To take responsibility for your research to ensure that there is conformity with the University regulations, on the advice of your supervisor;
- To record and report observations honestly and to examine experimental approaches critically;
- To acknowledge accurately all sources of information used and assistance received, and to ensure that all material complies with the University's Policy on Plagiarism;
- To consult with your Head of Department about the adequacy of supervision or about any complaints and other matters affecting research (where your supervisor is the Head of Department, you should consult with the Executive Dean of the Faculty);
- To bring cases of conflict between your supervisor and yourself to the attention of your Head of Department, or where your supervisor is the Head of Department, to the attention of the Executive Dean of the Faculty;
- To keep accurate records of the supervisory process by methods arrived at by mutual consent with your supervisor;
- To submit an annual progress report PG5a to the Head of Department; and
- To re-register timeously every year and to pay the fees in time (or to ensure, at each registration, that Student Fees has been officially informed of the relevant fee waivers: contact the Research and Postgraduate Support Directorate for further information).

At the **conclusion** of the project it is your responsibility:

- To follow the procedures laid down for preparation, submission and examination of the dissertation/thesis;
- To take responsibility for stylistic presentation of the dissertation/thesis, including grammar, spelling, punctuation and referencing. Your supervisor should not be expected to check grammar, spelling, typographical errors, corrections of references, etc.;
- To acknowledge accurately all sources of information used and information received.

Your supervisor's responsibilities in the supervisory relationship

Before the project begins it is the responsibility of your supervisor/s to:

- Identify the specific roles and responsibilities of each team member in the supervision process;
- Initiate discussion of the supervisory contract;
- Advise on resources and support systems;
- Discuss and plan to address risks and benefits of the proposed research;
- Approve the submission of the PG4a to the FRC;
- Guide you, where possible, to obtain financial support for the research project;
- Inform you, before the research begins, of any risks involved in the project, e.g. possible unavailability of data;
- Where appropriate, clearly indicate to you what may be expected of you in terms of field trips, use of hazardous chemicals, etc.;
- Where appropriate, indicate to you that you may be required to sign confidentiality agreements;
- Bring to your attention the University's Policy on Plagiarism.

During the course of the research project it is the responsibility of your supervisor/s to:

- Negotiate with you mutually acceptable arrangements regarding the sequence of tasks to be undertaken, target dates, submission of work for scrutiny and the setting up of a schedule of meetings between supervisor and you;
- Give guidance on the formulation of the research proposal to ensure that you are conversant with the relevant research methods and techniques, and where necessary, to help you to acquire and develop the relevant research skills;
- Ensure that your research complies with commonly accepted ethical standards for research in the discipline;
- Be available for guidance and discussion and to be prompt and comprehensive in response to stages of work completed, in accordance with mutually agreed arrangements as above;
- Motivate and encourage you, and endeavour to maintain a positive attitude to you and the research;
- Alert you to the academic requirements, the standard of language required, and any special conventions necessary in the presentation of a dissertation/thesis;
- Ensure at all times that you are aware of inadequate or sub-standard work in order to avoid misdirection and wasted effort. This responsibility includes alerting you to sub-standard linguistic ability;
- Advise on the organisation and style of the dissertation/thesis;
- Provide the opportunity for your work to be critically assessed by others with expertise in the field of study (e.g. the research proposal should be presented, in seminar form, to your peers and academic staff, and you should give paper presentations at conferences and submit of articles to relevant journals while your work is in progress);

- Bring cases of conflict between your supervisor and you to the attention of the Head of Department or, where the supervisor is the Head of Department, to the Executive Dean of the Faculty;
- Keep accurate records of the supervision process. The method of recording this process should be arrived at by mutual consent;
- Provide you with access to the record of the supervisory practice on a regular basis. This record should be signed by both you and your supervisor;
- Remind you to submit an annual progress report, and to submit a supervisor's annual report to the HoD.

At the conclusion of the project it is the responsibility of your supervisor/s to:

- Ensure, as far as the supervisor is able, that the dissertation/thesis will meet the standards likely to be required by the external examiners locally and internationally;
- Assist the HoD with the nomination of examiners for the Masters and Doctoral degrees, as/when required;
- Submit a report if the supervisor does not approve the submission of the dissertation/thesis;
- Report to the FRC and the HDC if ongoing interaction is known to have occurred between you and an external examiner nominated by the FRC;
- Take careful note of the reports of external examiners so that future research and supervision can be improved.

3.4 Your dissertation/thesis

For an online repository of DUT theses and dissertations go to <http://ir.dut.ac.za>

You are encouraged to consult as many dissertations/theses as possible to get a general overview of academic material within your field of study or related disciplines. General guidance on format and referencing are attached as an Appendix at the back of this Guide. However, note the following:

- You are required to make your own arrangements in respect of word processing and printing facilities for preparing your dissertation/thesis.
- You are required to make your own arrangements for the editing and proof-reading of the examination copy of your dissertation/thesis (this should be done right at the end, and only after supervisor approval of the content and structure).
- Your supervisor must check that editing and proof-reading has been done to the required standard before examination submission of your dissertation/thesis *but is not required to **do** the actual editing and proofreading.*

Number of copies

The number of copies required by the University for examination depends on the number of examiners appointed. For each Masters dissertation or Doctoral thesis at least two examiners

are appointed by Faculty Board. The Faculty Officer will advise the student of the number of copies required. These copies should be soft bound.

Preparing your electronic copy is important: go to <http://ir.dut.ac.za> for guidelines on what you need to do to meet the specifications required.

Upon completion of the examination procedure, at least one (1) hard bound copy and one (1) electronic copy in a single PDF format file, must be submitted to the relevant Faculty Office. These copies should be produced only after all of the Examiner's corrections have been made and approved by the relevant supervisor/HoD/Executive Dean. Bound and electronic copies must be accompanied by form PG12 signed by the HoD, stating that all corrections recommended by the examiners have been carried out satisfactorily. Each Faculty may require additional copies of the dissertation/thesis as per the Faculty's particular requirements.

Certain scholarships and bursaries require that a copy of the dissertation/thesis be submitted to the funding body. Such additional copies must be submitted to the relevant Faculty Officer.

Copyright

All authors in South Africa, including writers of dissertations/theses are bound and protected by the Copyright Act 98 of 1978, which may be consulted in the University Library. In terms of this Act, the copyright of the dissertation/thesis is vested in the writer.

Notwithstanding this, the University has the right to make copies of the dissertation/thesis from time to time for deposit in other universities or research libraries. The University may also make additional copies of it, in whole or in part, for purposes of research. The University may, for any reason, either at the request of the student or on its own initiative, waive its rights. Electronic copies of the dissertation/thesis are archived on the University's Institutional Repository after an initial embargo period (i.e. of the full text of the dissertation/thesis) of between six months to eighteen months (this is intended to protect students and give them the opportunity to publish, but the embargo may be lifted on request). Where applicable, a total embargo on publication of the contents or part thereof may be requested for an agreed period.

Arrangement of contents

The dissertation/thesis should *normally* contain the following, within an outside cover page:

- Title page
- Abstract
- Declaration by student
- Dedication
- Acknowledgements
- Table of contents
- List of illustrations, list of graphs, list of tables, list of equations
- Introduction

- Literature review
- Research design
- Results
- Discussion
- Conclusions and recommendations
- References
- Appendices as required

Title page

The recommended format is as follows:

- Title of the dissertation/thesis
- A statement that “This work is submitted in fulfilment of the requirements for the xxxx degree at the Durban University of Technology”
- Full name of the student
- Month and year in which the dissertation/thesis is submitted
- Title, initial, surname of supervisor/co-supervisor
- Date the supervisors approved the thesis/ dissertation for exam (and later, library) submission

Identification of clinical performance indicators in the emergency setting

Submitted in fulfilment of the requirements of the degree of Doctor of Technology: Health Sciences in the Faculty of Health Sciences at the Durban University of Technology

Academic Wannabee

SEPTEMBER 2014

Supervisor: _____ Date: _____

Co-supervisor: _____ Date: _____

Abstract

The abstract should be about one page in length. It is an important part of the dissertation/thesis and follows immediately after the title page. The purpose of the abstract is to inform potential readers about the work. The abstract should convey the reasons for the investigation, the research approach adopted, the overall research procedure, the results and conclusions. The original contribution of the research to the body of knowledge in the field should be stated early on in the abstract.

Declaration of originality by student

A final dissertation/thesis must include a declaration of originality from you. You are also required to include a statement certifying that the dissertation/thesis has not been submitted for a degree at any other university, and that its only prior publication was in the form of conference papers and/or journal articles (these should be listed in bibliography format directly underneath this statement).

Reference List

Referencing

Go to
<http://library.dut.ac.za>
for referencing
guidelines

There are many different referencing conventions; DUT uses a version of the Harvard Referencing System (or IEEE for Engineering). Students are advised to consult the latest reference guide available through the Library for guidelines on the Harvard referencing style. This guide explains how to cite in-text referencing and how to compile the reference list. It also aims to give a clear understanding of the method required for acknowledging sources of information in written work. The reference guide outlines the steps needed to ensure that the presentation of the references (both in-text and in the reference list) is academically presentable and correct.

EndNote

DUT has a campus wide license for EndNote. EndNote is a bibliographic citation tool that helps students to organise their citations and references as well as assisting with the relevant conventions that are followed at DUT. To download the software, go to <ftp://dutlib>. This site has the software, updates and the DUT Harvard style, together with a procedure on how to add the style to your personal library. Training is offered in EndNote. These sessions are advertised on the Library and/or the Postgraduate websites.

Appendices

Each appendix must be numbered from 1 (or A) upwards.

3.5 Submission of dissertation/thesis

A dissertation/thesis may be submitted for examination once only, although in certain circumstances the examiners may invite a student to revise and re-submit the dissertation/thesis.

A dissertation/thesis may be submitted at any time during the year, but you must indicate your intention to submit to the Faculty Officer at least *three months prior to submission*, using form PG7. Students who intend to submit a dissertation/thesis for examination should inform the Faculty Officer (via the HoD):

- by 1 November in order to qualify for the April graduation, and
- by 1 April in order to qualify for the September graduation.

If you cannot meet the annual deadline for notification to submit, the University may be unable to ensure that the examination procedures are completed in time for the graduation ceremonies.

Your student fee account must be settled in full before the examination result/graduation certificate can be released.

Every attempt is made to complete the examination process in as short a time as possible and in time for the next graduation ceremony. However, the primary consideration is an entirely fair yet comprehensive examination of the dissertation/thesis, with emphasis on maintaining high standards. For this reason, the most appropriate and best examiners are chosen. While the University seeks to have the examination completed as quickly as possible, time is not an

overriding consideration. The University is also unable to guarantee that the examiners will submit their reports by the recommended date. Generally examiners are given six weeks to examine the dissertation/thesis, but may well take longer.

Interference in the examination process in any way could invalidate the entire examination process and the awarding of the degree. This includes the nomination of examiners, which will not be discussed with, or disclosed to you. Only when a decision has been made about the award of the degree, will the names of the examiners be made known to you, provided the examiners have given their consent. Similarly, after a decision has been made, all or part of an examiner's report may be made known to you, provided the examiner has given his/her consent.

3.6 Examination of an MTech dissertation

Notification of intention to submit a dissertation for examination

A dissertation may be submitted at any time during the year, but you must indicate your intention to submit by writing via the HoD to the Faculty Officer *at least three months prior to submission*, using form PG7. At least two examiners, both of whom are external, and neither of whom may be the supervisor/co-supervisor, are appointed by the HoD, approved by the FRC, and ratified by the HDC. If the supervisor does not approve the submission of the dissertation, he/she is required to submit a report. This report will normally not be made available to the examiners and definitely not before they have submitted their independent reports on the dissertation. In this case the HoD should sign of the Title page of the thesis for examination submission.

Examiners' recommendations

The recommendations open to examiners include:

- Acceptance "as is" of the dissertation and awarding of the degree (distinctions are awarded only for MTech degrees).
- Acceptance of the dissertation once minor revisions have been made to the satisfaction of the supervisor.
- Requirement of major revisions to the dissertation and re-examination of the revised dissertation.
- Rejection of the dissertation without opportunity of re-submission. (This requires the student to re-apply for registration.)

Examiners' reports

The Faculty Officer will forward the examiners' reports to the HoD, who will collate the results on form PG11 for formal recommendation of the examination result to the HDC. The examiner may request that his/her identity be withheld from the student and/or the whole or part of the report on good cause.

Unanimous acceptance by examiners

If there is unanimous acceptance by examiners, the Executive Dean of the Faculty through the HoD, recommends the approval of results and the Faculty Officer submits these (on forms PG10 and 11) to the HDC for final approval of the awarding of the degree. The Faculty Officer then informs you and your supervisor of the approval of the award of the degree, which may be dependent upon changes being made to the satisfaction of the HoD or the supervisor.

Lack of agreement by examiners

If the examiners disagree on the awarding of the degree, an arbiter may be appointed by the Faculty Board via the HDC.

Dissertation referred back for revision

A dissertation referred back for revision may fall into the following categories:

- Minor corrections to be done in accordance with the examiners' reports and to the satisfaction of the supervisor.
- The dissertation may be accepted subject to certain amendments or corrections being made. Where the corrections required are more extensive than typographical ones, the award of the degree may be approved subject to the required amendments or corrections having been made. The corrections are to be made to the satisfaction of the supervisor.
- The dissertation may need to be revised and re-examined. If any examiner insists that the dissertation be referred back to the student for major revision as a condition for the award of the degree, the examiner is required to indicate clearly, to the satisfaction of the HDC, what has to be done by the student. The examiner/s may be required to re-examine the dissertation after revision. If the dissertation is to be revised and re-examined, the student may be required to re-register for the duration of the process.

Copies of the examiners' reports will be sent to the supervisor and HoD by the Faculty Officer to specify the corrections to be made by the student. Copies of the revised dissertation must be submitted to the relevant Executive Dean and Faculty Officer within the required time for including the awarding of the degree in the next graduation ceremony.

Please read the brochure, "Guidelines for e-dissertation/thesis submission on the Durban University of Technology Institutional Repository", available at <http://ir.dut.ac.za> and <http://postgrad.dut.ac.za>. This brochure outlines the procedures and requirements relevant to submitting an electronic copy of the dissertation.

Award of the degree with distinction***Criteria for the award of a distinction***

The University reserves the award of a distinction for work of outstanding merit for Masters degrees only. When recommending a distinction, examiners are asked to look for evidence of real methodological and conceptual skills, clarity in exposition and development of argument, sound judgment, originality of approach and some contribution to knowledge, but not necessarily to expect total coverage of a major problem or a substantial breakthrough in a new area. The dissertation must also reflect literary skills appropriate to the subject.

Procedure for the award of a distinction

If all examiners agree that the degree be awarded with distinction, the recommendation is forwarded to the HDC for final approval. If one examiner recommends a distinction and the other a pass, there is a section on form PG11 requiring the latter to state if he/she would agree to the awarding of a distinction (i.e. if the other examiner should do so). If the examiners disagree, a recommendation will be made by the HoD and Executive Dean and referred to the HDC for approval.

Revised dissertation

A distinction will not be awarded to an MTech degree student if the dissertation has been re-examined after revision.

3.7 Examination of a DTech thesis

Notification of intention to submit a thesis for examination

A thesis may be submitted at any time during the year, but you must indicate your intention to submit by writing via the HoD to the Faculty Officer *at least three months prior to submission*, using form PG7.

The following procedures are followed once the notification has been received:

- At least two examiners, both of whom are external, and neither of whom may be the supervisor/co-supervisor, are appointed by the HoD, approved by the FRC, and ratified by the HDC. The most appropriate examiners are chosen and with particular care when the thesis is multi-disciplinary, or has some local applicability. Supervisors are excluded from examining except under exceptional circumstances approved by the HDC. Both examiners should be external to the University, from the relevant discipline, and affiliated to an academic institution. Where possible, at least one should be an international examiner. Two examiners from the same institution should not be appointed. If ongoing interaction is known to have occurred between a student and an external examiner nominated by a supervisor, this must be reported to the Executive Dean via the HoD. The nomination of examiners should not be discussed with or disclosed to the student.
- The HoD submits the names of examiners to the FRC for approval, and to the HDC for ratification.
- When external examiners are invited to act as examiners they are informed that, should they accept the invitation, contact with both the supervisor and the student is not permitted for the duration of the examination.
- In the event that an external examiner is unable to act, the Faculty Board will require further nominations from the department.

Examiners' reports

Examiners will be asked for a recommendation on the thesis by indicating one of the following:

- The student is awarded the degree and no corrections need be made to the thesis;
- The student is awarded the degree, but minor corrections (e.g., spelling, typing, references, etc.) should be made, to the satisfaction of the supervisor;
- The student is awarded the degree after the changes identified have been made, to the satisfaction of the supervisor;
- Although the thesis does not meet the required standard, the student is invited to undertake further work, revise and resubmit the thesis for re-examination by the examiners;
- The student is to submit to an oral or written examination on the subject of their thesis;
- The degree should not be awarded to the student.

In addition, examiners will be asked for a formal report on the thesis which should be sufficiently detailed to allow the HDC to reach an informed judgment.

In instances where your supervisor has not approved the submission of the thesis for examination, examiners are informed, at the conclusion of the examination process that the submission of the thesis does not necessarily mean that it has been submitted with the supervisor's approval.

From the outset of the examination process, the examiners are informed that their identity and reports will normally be revealed to the student at the end of the examining process. The examiner may request that his/her identity be withheld and/or the whole or part of the report on good cause.

The Faculty Officer collates the examiners' reports and forwards these to the HoD for formal recommendation of the result of the examination to the FRC.

The HoD, via the FRC, recommends to the HDC one of the following outcomes, that:

- The degree be awarded;
- The degree be awarded with minor corrections to the thesis. Such corrections should not delay the award of the degree;
- The student should be awarded the degree subject to completing any specified changes to the thesis, to the satisfaction of the Executive Dean in consultation with the relevant supervisor and/or Head of Department;
- "Hung jury": the thesis is submitted to a new examiner;
- "Hung jury": the thesis is submitted to an arbiter;
- The degree should not be awarded to the student.

In the event of a major disagreement between the examiners, the Executive Dean sees whether consensus can be attained, if necessary, by sending all the unnamed examiners' reports to each examiner for further consideration. Failing consensus, the Executive Dean may recommend one or more of the following procedures:

- The appointment of a third examiner, who is invited in the usual manner;

- The appointment of an external assessor who reads the thesis and all the (unnamed) examiners' reports and reports on the thesis;
- The student submits to an examination on the subject of their thesis;
- The thesis is revised and re-examined by the dissenting examiner(s);
- The degree is not awarded.

The report, together with the examiners' reports, is submitted by the Executive Dean for final approval by the HDC. Neither the result nor the names of examiners are given to students until the HDC has taken a final decision. Students who are required to make minor corrections to their theses must do so prior to submission of the required library copies to the Faculty Office.

Corrections

Copies of the examiners' reports are sent to the supervisor and HoD by the Faculty Officer so that you may do the required corrections. When these corrections have been satisfactorily completed, the supervisor certifies this on form PG12 via the HoD to the Faculty Officer.

If the HDC requires minor changes, revision or re-submission, you may be requested to supply a statement indicating your response to each of the examiners' suggestions item by item. Written reasons for not accepting a suggestion should be given. The request to supply such a statement does not detract from the prime importance of you answering the external examiners' critiques with the amended thesis. The statement may be sent to an examiner at the discretion of the Chair of the HDC.

After the corrections have been approved you must submit the required number of copies of the thesis to the Faculty office. A copy of the thesis is housed in the University Library, and an electronic copy is archived on the University's Institutional Repository.

Please read the brochure, "Guidelines for e-dissertation/thesis submission on the Durban University of Technology Institutional Repository", available at <http://ir.dut.ac.za> and <http://postgrad.dut.ac.za>. This brochure outlines the procedures relevant to submitting an electronic copy of the thesis.

3.8 Graduation

Senate sets the graduation dates. The title "Dr" and the letters of the degree (e.g. "MTech" or "DTech") may be used only after graduation. Full particulars about graduation, including academic dress, are forwarded to successful students well in advance of graduation. All enquiries about graduation should be directed to the Faculty Office.

4 MONEY MATTERS: BUDGETS, FEES AND FUNDING SUPPORT

4.1 Research budgets

While you are developing your research proposal, you and your supervisor will also spend time determining what funds you need in order to conduct your research, and compiling a budget. The University makes a specific sum of money available, based on your **research proposal budget**. The relevant FRC is responsible for vetting the financial needs of the proposed research before approving the proposed budget. The budget thresholds for postgraduate programmes are:

MTech	DTech
R10 000.00	R15 000.00

(These amounts are subject to change at the beginning of each year.)

Some general guidelines for building your Research Budget

Travel costs	Estimated travel costs should be based on the AA rates applicable at the time. The fluctuation of the fuel price will make this challenging therefore an estimate is required. Air travel and car hire should be planned via the respective low budget companies and students are encouraged to make these arrangements timeously to qualify for reduced prices.
Equipment	Equipment purchased from the proposal budget will remain a departmental asset upon completion of the research project.
Software	DUT has acquired site licences for the following software: <ul style="list-style-type: none">1. EndNote2. SPSS3. NVivo (30 user licence) Other individual software requirements must be included in the Research Proposal Budget.
Editing and proof-reading	The cost of editing and proof-reading may be included in the Research budget, but this service should be used for final polishing of the thesis after supervisor approval of the content and structure and before examination submission. Some departments have lists of approved proof-readers. Check with your supervisor what items need to be checked in proof-reading and ensure that the proof-reader is prepared (and able) to check these items.

Research Budgets are put into a cost centre linked to the student's name, and managed by the relevant supervisor. You gain access to these funds through Departmental Purchase Requisitions, as follows:

Purchasing items on your Research Budget

Items/services on your Research Budget may be purchased **after FRC approval** *through the department in which you are registered*. This means obtaining quotations (3, if a DUT

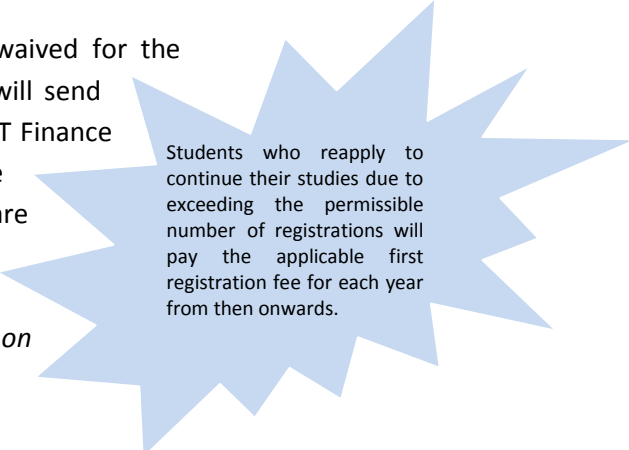
"preferred supplier" is not used), and asking the Departmental Secretary to fill in a purchase requisition form, which is then signed by the HOD and Supervisor (and the Dean, if the item/service costs over R10, 000). A copy of the approved proposal budget must accompany the requisition form. This should be done well before the item/service is required, or you may have to purchase the item/service out of your own pocket and ask for a refund *through the same purchase requisition process* (be sure to keep copies of all receipts). Ensure that you find out how the department processes purchase requisitions and what documents are required (make and keep copies of all documents submitted.)

Budget requests which exceed the threshold amounts will be your responsibility. One way in which you can address these additional costs is by applying to external funding agencies/scholarships, for example, the National Research Foundation.

4.2 Fees

The fee structure for full research postgraduate students is as follows:

Tuition fees for Masters and Doctoral students will be waived for the academic years 2011-2014. The respective faculty office will send the list of students whose fees are to be waived to the DUT Finance Office (Ms: Faith Judith Brissett) who will then unblock the student accounts for the academic year that the students are to register (or re-register).



Students who reapply to continue their studies due to exceeding the permissible number of registrations will pay the applicable first registration fee for each year from then onwards.

This waiver operates only within the stipulated time limits on Masters and Doctoral degrees.

International (foreign) postgraduate students at Masters and Doctorate level do not pay a foreign levy.

4.3 Funding support for Masters and Doctoral degrees

DUT covers tuition fees for full research Masters and Doctoral degrees by means of the fee waiver. Support is also available for postgraduate students, on application, to attend conferences, to present papers, to undertake study visits, or to assist with the publication of articles in journals. For full time postgraduate students, there is also the possibility of taking up a Graduate Assistantship in your department. Scholarships and bursaries are available from external sources for higher degree study. Various other forms of assistance are available from a variety of funding agencies and sources such as the National Research Foundation (NRF) and industry. Because these differ widely for the various disciplines, supervisors are best placed to advise you about possible sources of financial assistance.

5 RESEARCH RESOURCES

Research is impossible without access to information.

Library and information resources

The DUT Library has a large and extensive journal and book collection and it subscribes to a number of carefully selected electronic bibliographic databases and electronic journals, providing full-text access to many research articles.

For a comprehensive list of its resources and a detailed description of the services which the Library offers, visit the website at <http://library.dut.ac.za>.

Subject librarians for each faculty provide comprehensive support and assistance in showing students how to find relevant information for their research needs.

Information Technology Support Services

Information Technology Support Services (ITSS) provides computer and networking resources and user support to all departments and researchers at the University. A great deal of autonomy is given to researchers in setting up their own computing environment, with assistance available from the Faculty Office/ ITSS, if requested.

Postgraduate computer laboratories

In addition to the above, the Research and Postgraduate Directorate, in conjunction with faculties, is identifying suitable space for postgraduate computer laboratories. As at the point of preparing this 2014 Guide, postgraduate computer facilities are available at:

Alan Pittendrigh Library, Steve Biko Campus
Arts & Design Faculty, City Campus
BM Patel Library, ML Sultan Campus
Health Sciences Faculty, Ritson Campus
Indumiso Campus
Riverside Campus

6.1 Publication of research

One of the guidelines for the doctoral degree is that the thesis should show that the student has made a substantial and original contribution to knowledge in the discipline, the substance of which is worthy of publication in a scholarly journal or book.

DUT encourages the publication of work done for higher degrees (with the supervisor as joint author, where appropriate). Every attempt should thus be made to publish as much of the dissertation/thesis material as possible.

6.2 General rules

The General Rules of the University relating to postgraduate studies are contained in the General Handbook for Students, issued at registration, and which may be obtained from the Faculty Office. These rules should be consulted when reading this Postgraduate Student Guide.