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APPLICATION PROCESS FOR BSc HONS, MSc AND PhD

1. The applicant can apply online or access the forms online https://www.wits.ac.za/applications/portal/index or collect an application form from the Student Enrolment Centre, Ground Floor, Senate House, WITS.

2. The application is captured onto SIMS by the Postgraduate Division of the Student Enrolment Centre and forwarded electronically to the relevant School for consideration.

3. The School Graduate Studies Committee (GSC) representative/designate evaluates the application, if the school wishes to accept the applicant; a supervisor for an MSc by research and for a PhD needs to be assigned. If the application is rejected a reason must be provided.

4. The provisional outcome of the application is captured on SIMS by the GSC representative/designate.

5. The application is forwarded electronically to the Faculty Office and the final decision is captured on SIMS.
REGISTRATION OF POSTGRADUATE CANDIDATES
UNIVERSITY OF THE WITWATERSRAND
STUDENT ENROLMENT CENTRE - POSTGRADUATE UNIT
APPLICATION PROCESS FOR POSTGRADUATE PROGRAMS

Enquiry by applicant:
Applicant contacts the Student Enrolment Centre Postgraduate Unit (SEnC PG Unit) either in person, telephonically or by correspondence

Enquiry by applicant:
Applicant contacts the Head of School/School Postgraduate Co-ordinator and is referred to the SEnC PG Unit

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Applicant can apply online or collect a postgraduate application form from SEnC PG Unit containing:
- Application form and flow chart of admissions process
- Faculty specific check list
- Faculty specific application documentation
- Wits International Office information booklet (where applicable)

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International applicants must include:
- Proof of English proficiency
- SAQA evaluation
- Curriculum vitae
- A hard copy of official academic transcripts of previous results and or current registration
- Certified official degree certificate/s
- Proof of payment of application fee
- Faculty specific required documents

South African applicants must include:
- A hard copy of official academic transcripts of previous results and or current registration
- Certified official degree certificate/s
- Curriculum vitae
- Faculty specific required documents
- Proof of payment of application fee

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If any information is missing, it is marked on the system as an incomplete item and included on the acknowledgement letter. No decisions can be taken if any item is outstanding.

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Applicant applies online and upload required documents to SEnC PG Unit
or
Applicant completes all relevant application forms and returns these to the SEnC PG Unit with required documents.

---

A letter of acknowledgement of receipt of application (with no decision) is generated and emailed to applicant on the day after capture.

---

Once complete, the application is forwarded to the GSC representative so that the decision-making process may commence. The Faculty will capture the decision and the decision letter is generated and emailed to the applicant.

Please direct enquiries regarding admissions to postgrad.senc@wits.ac.za. Please refer to http://www.wits.ac.za/postgraduate/11562/postgraduate.html for information on programme and course offerings, as well as to apply online.
REGISTRATION OF POSTGRADUATE CANDIDATES

South African Candidates
The candidate must pay an upfront registration fee or apply for a fee waiver through self-service.

International Candidates
Proof of payment of tuition fees and medical aid must be provided to the Wits International Student Office (WISO). Candidates must have a valid study permit and must obtain clearance from the WISO.

Candidates register online. When difficulty is experienced, please contact the Faculty Office.

First Time Registrations: BScHons, MSc(Research), PhD, MSc(CW/RR)
Candidates must accept firm offers online through the self-service facility on the Wits website.
Candidates are encouraged to register online.
MSc Coursework and Research Report candidates are advised to contact the relevant course coordinator before selecting courses.

Returning Registration: BScHons, MSc(Research), PhD
Candidates are encouraged to register online.
MSc Coursework and Research Report and BSc Hons candidates are advised to contact the relevant course coordinator before selecting courses.

Candidates’ are issued with a card at the TCS office once registration has been completed.
Candidates must check their Wits e-mail for registration details.

Please note: All communication from the University is sent to the Wits email address. For assistance on setting up this facility contact the helpdesk on 011 717 6014 or itstudenthelp@wits.ac.za

All returning students are required to register annually before the end of February.
REGISTRATION GUIDELINES FOR FIRST SUBMISSION FOR EXAMINATION

A candidate is required to submit an intention to submit form to the Faculty three months prior to first submission.

The Faculty will notify the supervisor that the candidate is intending to submit for examination and examiners should be nominated. If the Faculty has a different title or supervisor on their records, the Faculty will inform the candidate accordingly.

First submission includes:
- First submission form;
- Acquiescence form;
- PDF of submission on a CD – must include signed declaration;
- Supervisors will advise candidate if they should submit bound copies for examination; and
- Plagiarism Report.

Submission between 1 January - 28 February
Only if the above is completed correctly, will the Faculty accept the submission for examination.

Submission between 1 – 24 March
The candidate is required to submit a postgraduate amendment form applying for an extension to submit for examination. This application must be sent to the Faculty by 15 February. All applications for an extension are approved by the GSC Chairperson and by the Faculty Registrar.

Submission between 1 April - 15 December
A candidate is required to register by 28 February and pay the required registration fee.

Registration Procedure: Local Candidates:
- The Faculty will give the candidate a letter confirming “awaiting examiner” status;
- The candidate takes the letter to fees office, pay the copyright fees;
- The Faculty will supply the candidate with a registration form to complete and register candidates as “awaiting examiners” (exempt fees); and
- Candidate will update the student card at TCS.

Registration Procedure: International Candidates
- The Faculty will give the candidate a letter confirming “awaiting examiner” status and a completed Fee Quotation Form;
- The candidate takes the quotation form to The Fees Office and receives a fees clearance certificate;
- The candidate takes the fees clearance with the valid passport and a valid permit (study/work) to the WITS International Student Office (WISO);
- The WISO will issue an International Clearance Certificate;
- The candidate will return to the Faculty with International Clearance Certificate sign a registration form;
- The Faculty will register the candidate as “awaiting examiners” (exempt academic fees); and
- Candidate will update the student card at TCS.

PLEASE NOTE:
This registration procedure also applies to local and international candidates that have ALREADY SUBMITTED FOR EXAMINATION IN THE PREVIOUS YEAR. Candidates are exempted from fees provided that the three months corrections period has not been exceeded. (See Senate Standing Orders on Higher Degrees A34 Revision)
Faculty of Science

Division of Postgraduate Academic Management
Guidelines for Conversions

CONVERSION FROM MSC (DISSERTATION) TO PHD

Candidates must be registered for the MSc (Dissertation) when they apply for the conversion.

Candidates are required to submit the following to the Faculty prior to consideration for a conversion:
- A postgraduate amendment form applying for the conversion;
- Letter of motivation (including the rule used for the conversion) from the candidate’s supervisor supported by the GSC representative or Head of School;
- A Research Proposal for the PhD; and
- An online application form for the PhD.

Conversion of Candidature from MSc to PhD in terms of RULE G 12.2
(please refer number 4 and 5 of the Faculty Standing Orders for further information)

If approved:
The candidate, supervisor and GSC representative will be notified via email of the approval. The Faculty will convert the candidate’s registration and it will be noted by the GSC.

If not approved or requires revision:
The candidate, supervisor and GSC will be notified via email and it will be noted by the GSC.
AMENDMENT TO REGISTRATION

A postgraduate candidate must complete a postgraduate amendment form for the following:

i. Change of address;
ii. Change in title of thesis/dissertation/research report;
iii. Change in supervisor;
iv. Conversion from one degree to another;
v. Conversion from full-time to part-time;
vi. Extension on submission of research proposal or first submission of thesis/dissertation/research report;
vii. Request for abeyance; and
viii. Adding or dropping of courses.

Forms can be downloaded from http://www.wits.ac.za/academic/science/postgraduate/13903/amendment_to_registration.html

The candidate completes the form and obtains approval and signatures from the supervisor and GSC representative:

i. Forms should be submitted electronically to the Faculty Office;
ii. The Faculty Office ensures the forms are correctly completed by the candidates;
iii. Informs the candidates of potential problems; the Faculty Officer obtains approval from the GSC Chairperson for all amendments except the adding and dropping of courses;
iv. Once an outcome has been reached the Faculty Officer updates SIMS and informs the students, GSC representatives and the candidates’ supervisors of the outcome by emailing to their WITS email addresses;
v. Letters are generated from SIMS depending on the nature of the amendment. If a candidate adds or drops units, converts from one degree to another or changes from full-time to part-time then an e-mail is sent to the candidate’s Wits e-mail address; and
vi. The Faculty Officer enters this information onto the GSC agenda for noting.
# Postgraduate Studies Amendment Form

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<td>Person Number:</td>
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<td>Qualification registered for:</td>
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<td>School:</td>
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<td>Title of thesis/dissertation/research report:</td>
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<tr>
<th>Name of Supervisor / Co-Supervisor</th>
<th>Supervisor / Co-Supervisor</th>
<th>School</th>
<th>% of Supervision</th>
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### 1. Requests

- Extension of time for submission of Research Proposal (max. 3 months)
  - From:  
  - To:  
- Extension of time for submission of research for examination
  - From:  
  - To:  
- Give details of any previous extension
  - From:  
  - To:  
- Registration to be put in abeyance
  - From:  
  - To:  
- Give details of your registrations which have previously been put in abeyance
  - From:  
  - To:  

### 2. Conversions (Including from full-time to part-time or vice versa)

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<th>From Degree</th>
<th>To Degree</th>
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### 3. Request for Change in Title

- Title of research to be changed

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### 4. Request for Change in/or Add Supervisor

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(Updated in 2017 and approved by the Science Faculty Board on 11 October 2017)
Detailed motivation for changes to 1, 2, 3 and 4:

5. Amendment of courses

<table>
<thead>
<tr>
<th>Course to be dropped</th>
<th>Course Code</th>
<th>Course Description</th>
<th>Approval (Signature) of Course Co-ordinator</th>
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<th>Course to be registered</th>
<th>Course Code</th>
<th>Course Description</th>
<th>Approval (Signature) of Course Co-ordinator</th>
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6. Approval

<table>
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<th>Name of Head of School or Postgraduate Co-ordinator</th>
<th>Signature</th>
<th>Date</th>
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<th>Name of Supervisor</th>
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Please note that applications for extensions beyond the registration period carry fee implications
Faculty of Science  
Division of Postgraduate Academic Management

RESEARCH PROPOSAL

Full-time candidates are required to submit a research proposal four months (MSc dissertation) or six months (PhD) after registration and part-time candidates are required to submit a research proposal eight months (MSc dissertation) or twelve months (PhD) after registration.

MSc (coursework and research report) programs require different specifications for the research proposal and candidates should contact the school course coordinator.

As soon as a candidate registers, the supervisor should contact the GSC representative from the school to find out the school's procedure to access and approve a research proposal prior to submission to the Faculty.

Guidelines on the preparation of a research proposal can be downloaded from http://www.wits.ac.za/academic/science/postgraduate/13853/research_proposal.html

Once approval for submission has been obtained from the school, the candidate is required to submit the research proposal together with the completed research proposal form and a signed statement of principles for postgraduate supervision. Forms can be downloaded from http://www.wits.ac.za/academic/science/postgraduate/13853/research_proposal.html

The research proposal is sent to the GSC Chairperson for final approval. Based on the outcome a letter is generated to the student and supervisor. The candidate’s record on SIMS is updated. The Faculty Office enters details of the research proposal onto the next GSC agenda for noting.

PROGRESS REPORTS

Annual Progress Reports are issued by the Faculty for each registered candidate in July of each calendar year. These progress reports must be completed by the candidate and supervisor and returned to the Faculty by the GSC representative of each school. Upon receipt the Faculty will process and act on the recommendations of the supervisor.
Guidelines on the Preparation of the Research Proposal

This is a guideline document to assist candidates on the content of Research Proposals. Research Proposals should include the following components:

i. **Introduction**
The introduction provides the reader with sufficient information on the field of study to allow for an appreciation of the proposed research i.e. it places the project in context with what is known. This section can also form the basis for the introduction of the dissertation/thesis.

ii. **Aim**
A clear statement of the general aims of the project plus a set of objectives that are potentially achievable.

iii. **Hypotheses and Questions**
A hypothesis is a tentative theory about the natural world that can be tested by further investigation, whilst the questions allow for more specific/focussed attention to particular aspects of the project. It is essential that the hypotheses and/or questions are clearly and unambiguously stated. Since it is these statements that are going to guide the research through the practical portion of the project and will also assume central roles in the written dissertation/thesis it is important to consider their wording and composition very carefully. Many candidates find this a difficult task.

iv. **Methodology**
This section varies with each discipline. In essence the section provides a detailed description of what material is to be used, what experimentation is to be conducted, what data are to be collected and how the data are to be analysed. It is worth spending time on this section as it will give you a clear indication of what work you will be conducting and assists you in planning the project. Consideration must also be given to the following: whether the material is readily available; whether permission is required to gain access to the material; whether ethics clearance is required. Solutions to potential problems must also be considered.

v. **Work plan**
This plan details what work is to be done and when. It is essential that when this plan is prepared, you are realistic about what can be achieved in any given time. You will find that you often underestimate how long it will take to achieve a particular task, check your timings with your supervisor or other senior postgraduates in your field.

As is common in industry and the broader work place, many supervisors also ask for a budget to be prepared for the project. The sources of funding must also be indicated.

A proposal document is considered by the School’s Postgraduate Committee or readers. Adjustments and corrections to the document may be recommended by the committee or by the readers. Once the project proposal has been accepted by the committee, the document is signed by the candidate, supervisor(s) and postgraduate co-ordinator/ Head of School. The signed document is submitted to the Faculty Office for consideration by the Graduate Studies Committee and represents a formal acknowledgement by the candidate to undertake the research under the guidance of the supervisor(s).

The proposal document must be submitted to the Faculty Office within a specified period of the original registration, or the School may cancel the registration of the candidate. (Full-time masters’ candidates must submit within four months, part-time masters candidates must submit within eight months. Full-time doctoral candidates must submit within six months and part-time doctoral candidates must submit within twelve months.)
# SUBMISSION OF THE RESEARCH PROPOSAL

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**Title of Research Proposal:**

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1. Will the research involve animal experimentation?
   If YES, please certify that clearance was obtained from the Animal Ethics Committee.
   **Clearance Number:**

2. Will the research involve the use of human subjects?
   If YES, please certify that clearance was obtained from the relevant Ethics Committee.
   **Clearance Number:**

3. Will the research involve using genetically modified organisms or substances?
   If YES, please certify that clearance was obtained from the relevant Biosafety Review Board.
   **Clearance Number:**

4. **ORCID number:**

**Candidate’s Signature:** ______________________________

**Supervisor’s Name:** ___________________________ **Supervisor's Signature:** ______________________________

**Co-supervisor’s Name:** _________________________ **Co-supervisor's Signature:** ________________________

**Head of School/Designate Name:** ___________________________ **Head of School/Designate Signature:** ___________________________

**Date:** ______________________________

---

A Research Proposal should include the following components:

- Introduction
- Aim
- Hypotheses and Questions
- Methodology
- Work plan

Guidelines on the length of a Research Proposal:

- PhD [± 3000 words]
- MSc (dissertation) [± 3000 words]
- MSc (coursework and research report) [1500 to 1800 words]

(Updated in 2017 and approved by the Science Faculty Board on 11 October 2017)
# 16. STATEMENT OF PRINCIPLES FOR POSTGRADUATE SUPERVISION

**IN A CONTEXT OF ACADEMIC FREEDOM AND WITHIN A FRAMEWORK OF INDIVIDUAL AUTONOMY AND THE PURSUIT OF KNOWLEDGE THIS AGREEMENT IS WRITTEN IN THE BELIEF THAT THERE IS A RECIPROCAL RELATIONSHIP AND MUTUAL ACCOUNTABILITY BETWEEN SUPERVISOR AND STUDENT.**

## THE SUPERVISOR AND THE STUDENT:

1. Will establish agreed roles and clear processes to be maintained by both parties. In the case of joint supervision everyone’s role needs to be clarified.
2. Will meet regularly and as frequently as is reasonable to ensure steady progress towards the completion of the proposal, research report, or dissertation or thesis. This time varies but the normal minimum requirement for face-to-face contact, spread across each year of registration is: 10 contact hours for an Honours project, 15 contact hours for a Masters by research report and 24 contact hours for a Masters by dissertation and a PhD.
3. Will keep appointments, be punctual and respond timeously to messages.
4. Will keep the other informed of any planned vacations or absences, as well as changes in his or her personal circumstances that might impact on the work schedule.
5. Will ensure that research on animal or human subjects is conducted according to the procedures and the requirements of the University Ethics committee.
6. Will together complete progress reports on the research project, as requested by the Faculty Graduate Studies Committee.

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## THE SUPERVISOR:

1. Undertakes to provide guidance for the student’s research project in relation to the design and scope of the project, the relevant literature and information sources, research methods and techniques and methods of data analysis.
2. Has the responsibility to be accessible to the student.
3. Will be prepared for meetings with the student.
4. This includes being up-to-date on the latest work in his/her area of expertise.
5. Will provide advice that can help the student to improve his/her writing. This may include referring to standard English language training and academic writing. The supervisor will provide guidance on technical aspects of writing such as referencing as well as on discipline specific requirements. Detailed correction of drafts and instruction in aspects of language and style are not the responsibility of the supervisor.
6. Will support the student in the production of a research report, dissertation or thesis. Provision should be allowed for adequate, mutually respectful, discussion around recommendations made.
7. Will assist with the construction of a written time schedule which outlines the expected completion dates of successive stages of the work.
8. Will ensure the student has the opportunity to present work at postgraduate/staff seminars/sectional/international conferences as appropriate.
9. Will assist with the publication of research articles as appropriate.
10. Will discuss the ownership of research conducted by the student in accordance with the University guidelines and roles on intellectual property, co-authorship and copyright.
11. Will ensure that the research is conducted in accordance with the University’s policy on plagiarism.
12. Will ensure that the student is made aware of the inadequacy of progress and/or of any work where the standard is below par. Acceptability will be according to criteria previously supplied to the student.
13. Has a duty to refuse to allow the submission of sub-standard work for examination, regardless of the circumstances. If the student chooses to submit without the consent of the supervisor, this should be clearly recorded and the appropriate procedures followed.

## THE STUDENT:

1. Undertakes to work independently under the guidance of the supervisor. This includes reading widely to ensure that the literature pertinent to his/her chosen topic has been identified and consulted.
2. Is obliged to make appointments to see the supervisor and will arrange meeting times well in advance.
3. Will think carefully about how to derive maximum benefit from these contact sessions by planning what he/she wants to achieve in these sessions.
4. Should submit written work for discussion with the supervisor well in advance of a scheduled meeting. The kind and frequency of written work should be agreed with the supervisor at the outset of the research.
5. Undertakes to submit written work that is relatively free of basic spelling mistakes, incorrect punctuation and grammatical errors. Responsibility for the accuracy of language, the overall structure and coherence of the final research report, dissertation or thesis rests with the student.
6. Undertakes to heed the advice given by the supervisor and to engage in discussion around suggestions made. Ultimately the student has to take responsibility for the quality and presentation of the work.
7. Should, true to reasonable bounds, maintain a focus on his/her research area and to work within the agreed time schedule.
8. Will prepare material for presentations at seminars and conferences.
9. Undertakes to submit papers for publication.
10. Agrees to honour agreements about ownership of the research and in accordance with the University’s guidelines and rules in relation to co-authorship, copyright and intellectual property.
11. Will ensure that the work contains no instances of plagiarism and that all citations are properly referenced and that the list of references is accurate, complete and consistent.
12. Agrees to work in accordance with the criteria of acceptability as supplied by the supervisor.
13. Undertakes not to place the supervisor under undue pressure to submit work for examination until the supervisor is satisfied that it has reached an acceptable level of quality.

---

**I confirm that I have read and understood this statement and agree to be guided by its principles.**

| Name of student | :__________________ |
| Student’s signature | :__________________ |
| Name of Supervisor | :__________________ |
| Supervisor’s signature | :__________________ |
| Name of Co-Supervisor | :__________________ |
| Co-Supervisor’s signature | :__________________ |

The broad area of study is: ______________

Provisional submission date is: ______________

Degree: ______________

School: ______________

Faculty: ______________

Date: ______________

Specific agreements pertaining to: ownership and joint publication, funding, etc. may be attached and signed.

---

**GRIEVANCE PROCEDURES** It should be acknowledged that during the course of the research, both students and supervisors can feel aggrieved. In this event, matters should be dealt with as swiftly as possible by the parties involved and, if necessary, the appropriate Postgraduate Coordinating and Committee. There is, in addition, a University Grievance Policy to help guide deliberations. It is available on www.wits.ac.za/prospective/postgraduate.
Progress Report on Higher Degree Candidate – 20...

Candidate Name:  
Person Number:  
Degree:  
Full- or Part-Time:  
Date of first registration:  
Period of registration (N+*):  
Name of Supervisor / Co-Supervisor:  
School:  
Title:  

<table>
<thead>
<tr>
<th>1. Since July 20.. I have seen the following written work:</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
</tr>
<tr>
<td>2. Since July 20.. I have seen the following practical work:</td>
</tr>
<tr>
<td></td>
</tr>
<tr>
<td>3. The candidate has consulted with me ………………. times in the last 12 months.</td>
</tr>
<tr>
<td></td>
</tr>
<tr>
<td>4. The candidate’s progress is/is not satisfactory (Please delete one)</td>
</tr>
<tr>
<td>Reasons for poor progress:</td>
</tr>
<tr>
<td></td>
</tr>
<tr>
<td>5. Milestones:</td>
</tr>
<tr>
<td>Research Proposal: Y/N</td>
</tr>
<tr>
<td>Progress Report: Y/N</td>
</tr>
<tr>
<td>Nomination of Examiners: Y/N</td>
</tr>
<tr>
<td>Submission for Examination: Y/N</td>
</tr>
<tr>
<td>5. I recommend:</td>
</tr>
<tr>
<td>Continuation:</td>
</tr>
<tr>
<td>An extension:</td>
</tr>
<tr>
<td>A warning:</td>
</tr>
<tr>
<td>Abeyance:</td>
</tr>
<tr>
<td>Cancellation:</td>
</tr>
<tr>
<td>Other, e.g. corrections:</td>
</tr>
<tr>
<td>If you recommend any of the above please provide a motivation or reasons:</td>
</tr>
<tr>
<td>6. a) Has the candidate completed her/his research?</td>
</tr>
</tbody>
</table>

(Updated in 2017 and approved by the Science Faculty Board on 11 October 2017)
b) When is the candidate expected to submit the completed thesis/dissertation/research report for examination:

7. Any additional comments:
   Supervisor:
   Candidate:

This form, when signed by the candidate and supervisor, should be sent to the Head of School/Postgraduate Co-ordinator for noting and forwarding to the Faculty

<table>
<thead>
<tr>
<th>Name of Head of School or Postgraduate Co-ordinator</th>
<th>Signature</th>
<th>Date</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
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</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Name of Supervisor</th>
<th>Signature</th>
<th>Date</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
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<td></td>
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</tbody>
</table>

<table>
<thead>
<tr>
<th>Name of Candidate</th>
<th>Signature</th>
<th>Date</th>
</tr>
</thead>
<tbody>
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<td></td>
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</tbody>
</table>

* Degree | Minimum (n) HEQSF | Wits (n+1) | Maximum |
<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>MSc (Full-time)</td>
<td>1 year</td>
<td>2 years</td>
<td>3 years</td>
</tr>
<tr>
<td>MSc (Part-time)</td>
<td>1 year</td>
<td>3 years</td>
<td>4 years</td>
</tr>
<tr>
<td>PhD (Full-time)</td>
<td>2 year</td>
<td>3 years</td>
<td>4 years</td>
</tr>
<tr>
<td>PhD (Part-time)</td>
<td>2 year</td>
<td>4 years</td>
<td>5 years</td>
</tr>
</tbody>
</table>
Faculty of Science

Division of Postgraduate Academic Management

Declaration of Intention to Submit for Examination

This form has to be completed and submitted to the Faculty Office at least THREE months before the thesis/ dissertation/ research report is submitted for examination

Name of Candidate: __________________________

Person Number: __________________________

Programme: __________________________

School: __________________________

Title of Thesis/Dissertation/Research Report: __________________________

<table>
<thead>
<tr>
<th>Name and Surname of Supervisor / Co-Supervisor</th>
<th>Supervisor / Co-Supervisor</th>
<th>School</th>
<th>% of Supervision</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

First Submission Requirements:

i. First submission form;

ii. Acquiescence form;

iii. Plagiarism check report;

iv. PDF of submission on a CD – must include signed declaration (file must be less than 5mb);

v. Supervisor will advise candidates if they should submit bound copies for examination;

vi. Supervisor report (This is submitted separately by the supervisor); and

vii. Publications (Registered for PhD 2014 onwards).

Student’s Signature : __________________________

Supervisor’s Name : __________________________

Supervisor’s Signature : __________________________

Co-supervisor’s Name : __________________________

Co-supervisor’s Signature : __________________________

Head of School/ Designate Name: __________________________

Head of School/ Designate Signature: __________________________

Date: __________________________

(Updated in 2017 and approved by the Science Faculty Board on 11 October 2017)
Examiners are nominated at least three months prior to candidates handing in their theses/dissertations/research reports for examination. This process is strictly confidential. The supervisor completes the Nomination of Examiners form, which is signed off by the GSC representative of the school. The supervisor may not be an examiner. Two examiners are needed for an MSc, one internal examiner and one external examiner and three examiners are needed for a PhD, one internal examiner and two external examiners. Internal and external examiners should not be nominated if they have been supervised, worked with or published with the supervisor within the last 5 years and they must not have supervised that person in the last ten years. A short motivation should be given as to why the examiners are appropriate. The typed completed Nomination of Examiners form, together with all the examiners’ CVs must be sent electronically to the Faculty Office. These CVs must contain details of their qualification/s, evidence of disciplinary knowledge, experience of postgraduate supervision and a list of publications.

*Forms are available from the Faculty of Science reception or can be downloaded from:* [http://www.wits.ac.za/academic/science/postgraduate/13908/nomination_of_examiners.html](http://www.wits.ac.za/academic/science/postgraduate/13908/nomination_of_examiners.html)

The Faculty Officer checks if the form has been signed by the GSC representative or Head of School and checks the information on the Nomination of Examiners form and examiners’ CVs. The Faculty Officer informs the GSC representative and supervisor if there are any problems or missing information.

The Faculty Officer obtains recommendation from the GSC Chairperson: The Faculty Officer then emails the Nomination of Examiners form and examiners’ CVs to the GSC members for approval. The Faculty Officer collates the responses; a two thirds confirmation from the GSC is required for approval. The outcome/comments received is forwarded to the GSC Chairperson.

The Faculty Officer enters the decision from the GSC onto SIMS and informs the GSC representative and supervisor of the outcome via email. The Faculty Officer enters each examiner’s information onto SIMS. The Faculty Officer enters the nominated examiners for noting on the next GSC agenda and files all documents on the candidate’s electronic file.
Faculty of Science

Division of Postgraduate Academic Management

Nomination of Examiners for Higher Degree Candidates

Please provide electronic copy to the Faculty Office.
Please provide a brief CV (electronic format) (for all examiners)

<table>
<thead>
<tr>
<th>Name of Candidate:</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Person Number:</td>
<td></td>
</tr>
<tr>
<td>Programme:</td>
<td></td>
</tr>
<tr>
<td>School:</td>
<td></td>
</tr>
<tr>
<td>Title of Thesis/Dissertation/Research Report:</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Name of Supervisor/Co-Supervisor</th>
<th>Supervisor / Co-Supervisor</th>
<th>School</th>
<th>% of Supervision</th>
</tr>
</thead>
<tbody>
<tr>
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</tr>
</tbody>
</table>

NOTE

(a) One internal and one external examiner or two external examiners required for Master of Science (MSc)
(b) One internal and two external examiners or three external examiners required for Doctor of Philosophy (PhD), of whom one should be a foreign expert

EXAMINER (1)

<table>
<thead>
<tr>
<th>Name (in full):</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Title:</td>
<td></td>
</tr>
<tr>
<td>Postal address:</td>
<td>Street address:</td>
</tr>
<tr>
<td>Telephone:</td>
<td></td>
</tr>
<tr>
<td>E mail:</td>
<td></td>
</tr>
<tr>
<td>Qualifications:</td>
<td></td>
</tr>
<tr>
<td>Present Position:</td>
<td></td>
</tr>
</tbody>
</table>

Motivation (Should include the disciplinary knowledge and experience of higher degree candidates)

Please answer all the following questions:

<table>
<thead>
<tr>
<th>Question</th>
<th>YES/NO</th>
</tr>
</thead>
<tbody>
<tr>
<td>Has this examiner been appointed on a previous occasion?</td>
<td></td>
</tr>
<tr>
<td>Has the examiner been approached to examine the thesis/dissertation/research report?</td>
<td></td>
</tr>
<tr>
<td>Has she/he agreed to examine the thesis/dissertation/research report?</td>
<td></td>
</tr>
<tr>
<td>Is the examiner prepared to examine the work sent electronically as a pdf file? If examiner agrees to examine by PDF no hard copy will be sent.</td>
<td></td>
</tr>
</tbody>
</table>
### EXAMINER (2)

| Name (in full): |  |
| Title: |  |
| Postal address: | Street address: |
| Telephone: |  |
| E mail: |  |
| Qualifications: |  |
| Present Position: |  |

**Motivation** (Should include the disciplinary knowledge and experience of higher degree candidates)

**Please answer all the following questions:**

- Has this examiner been appointed on a previous occasion? **YES/NO**
- Has the examiner been approached to examine the thesis/dissertation/research report? **YES/NO**
- Has he/she agreed to examine the thesis/dissertation/research report? **YES/NO**
- Is the examiner prepared to examine the work sent electronically as a pdf file? If examiner agrees to examine by PDF no hard copy will be sent. **YES/NO**

### EXAMINER (3)

| Name (in full): |  |
| Title: |  |
| Postal address: | Street address: |
| Telephone: |  |
| E mail: |  |
| Qualifications: |  |
| Present Position: |  |

**Motivation** (Should include the disciplinary knowledge and experience of higher degree candidates)

**Please answer all the following questions:**

- Has this examiner been appointed on a previous occasion? **YES/NO**
- Has the examiner been approached to examine the thesis/dissertation/research Report? **YES/NO**
- Has she/he agreed to examine the thesis/dissertation/research report? **YES/NO**
- Is the examiner prepared to examine the work sent electronically as a pdf file? If examiner agrees to examine by PDF no hard copy will be sent. **YES/NO**

(Updated in 2017 and approved by the Science Faculty Board on 11 October 2017)
I acknowledge that none of the examiners have had involvement in this candidate’s research project:

Name of supervisor: ____________________________________________
Signature of supervisor: ________________________________________

Name of Head of School/Designate: ______________________________
Signature of Head of School/Designate: ____________________________

Date: __________________________

Please note:

1. Confidentiality during the examination process

   The examination process commences once an examiner accepts her/his nomination to examine. The names of the examiners should be confidential during the examination process and may only be revealed to the candidate with the acquiescence of the examiner once the final version of the thesis has been submitted to the Faculty and the process has been completed. An examiner shall not consult another examiner, the supervisor or candidate except by permission of the Dean, usually in response to a request for further information, until the examination process is completed.

2. Submission of a supervisor’s report

   Once a candidate submits her/his thesis/dissertation/research report for examination to the Faculty, the supervisor must submit a supervisor’s report to the Faculty Registrar. The supervisor’s report is not an examiner’s report. It will be used by the Faculty Graduate Studies Committee for the quality assurance of supervision, and for insight into the relationship between the Supervisor’s assessment and that of the examiners. This report will not be seen by the examiners, but it will be given to the student along with the examiners’ reports, once the examination process is complete.
When candidates are ready to submit their theses/dissertations/research reports for examination, supervisors should check with the schools’ GSC representatives if the candidates/supervisors have fulfilled the schools’ requirement/s to submit their work for examination. For MSc (coursework and research report) candidates, this includes ensuring that all the marks have been submitted to the Faculty.

Three months prior to submission a candidate should submit an Intention to Submit form to the Faculty. This enables the Faculty to check the candidate’s record for title changes, change in supervisors and the Nomination of Examiners.

Submission Requirements:

i. First submission form;
ii. Acquiescence form;
iii. PDF of submission on a CD – must include signed declaration;
iv. Supervisors will advise candidates if they should submit bound copies for examination; and
v. Plagiarism report

Forms can be downloaded from

http://www.wits.ac.za/academic/science/postgraduate/13909/submission_for_examination.html

Guidelines for the report can be downloaded from

http://www.wits.ac.za/academic/science/postgraduate/13910/supervisor’s_report.html

The Faculty Officer couriers, hand-delivers or e-mails the PDF copy of the submission with a letter indicating the timeline for examination and examiner’s report form to the examiners. Examiners are given 6 weeks for examination. The Faculty Officer updates the PhD and MSc Examination spreadsheet to track the progress of examiners’ reports. All GSC representatives and Heads of School may request an electronic copy of the spreadsheet.
Faculty of Science
Division of Postgraduate Academic Management

First Submission of Doctor of Philosophy/ Master of Science for Examination

<table>
<thead>
<tr>
<th>Name of Candidate:</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Person Number:</td>
<td></td>
</tr>
<tr>
<td>Degree:</td>
<td></td>
</tr>
<tr>
<td>Supervisor / Co-Supervisor:</td>
<td></td>
</tr>
<tr>
<td>School:</td>
<td></td>
</tr>
<tr>
<td>Title of Thesis/Dissertation/ Research Report:</td>
<td></td>
</tr>
</tbody>
</table>

Please answer all questions by ticking the appropriate box

<table>
<thead>
<tr>
<th>Question</th>
<th>YES</th>
<th>NO</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Did the research involve animal experimentation?</td>
<td></td>
<td></td>
</tr>
<tr>
<td>If YES, please certify that clearance was obtained from the Animal Ethics Committee.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Clearance Number:</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2. Did the research involve the use of human subjects?</td>
<td></td>
<td></td>
</tr>
<tr>
<td>If YES, please certify that clearance was obtained from the relevant Ethics Committee.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Clearance Number:</td>
<td></td>
<td></td>
</tr>
<tr>
<td>3. Did the research involve using genetically modified organisms or substances?</td>
<td></td>
<td></td>
</tr>
<tr>
<td>If YES, please certify that clearance was obtained from the relevant Biosafety Review Board.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Clearance Number:</td>
<td></td>
<td></td>
</tr>
<tr>
<td>4. ORCID Number:</td>
<td></td>
<td></td>
</tr>
<tr>
<td>5. Have aspects of the research been published? If yes please provide details.</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
6 Have aspects of the research been presented at a conference/workshop? If yes please provide details.

Candidate's Declaration:

i. I hereby submit my PhD Thesis/ MSc dissertation / MSc research report for examination. (Delete whichever is not applicable)

ii. I confirm that my signed declaration in terms of Rule G9.7 is included in each copy of the thesis/ dissertation/research report.

iii. I have checked all copies of my thesis/ dissertation / research report and declare that no pages are missing or poorly reproduced.

iv. I hereby submit a CD containing a PDF version of my submission for examination and __________ bound copies.

Candidate's Signature: ___________________________ Date: _____________________

Please Note:
- You will not graduate until all your fees have been paid in full.
- You are required to complete a postgraduate amendment form to change personal details and information pertaining to your submission eg. changes to title.
- Your first submission must include an electronic copy of thesis/dissertation/ research report in PDF format and an acquiescence form. Your supervisor will inform you if you need to submit bound copies.
- You are advised to contact the Faculty Office for final submission requirements.

Contact Details for Postgraduate Administration, Faculty of Science:
Email: science.msc@wits.ac.za or science.phd@wits.ac.za
Faculty of Science  
Division of Postgraduate Academic Management  

Acquiescence Form

| Name of Candidate: |
| Person Number: |
| Degree: |
| Supervisor/s: |
| School: |

Title of Thesis/Dissertation/Research Report:

Date of First Submission:

Please answer all questions by ticking the appropriate box

<table>
<thead>
<tr>
<th></th>
<th>YES</th>
<th>NO</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Has this thesis/ dissertation/ research report been submitted with the acquiescence of the Supervisor?</td>
<td></td>
</tr>
<tr>
<td>2</td>
<td>To the best of your knowledge are you able to verify that the candidate has acknowledged wherever any information used in the thesis or other work have been obtained by her or him while employed by, or working under the aegis of, any person or organisation other than the University or its associated institutions?</td>
<td></td>
</tr>
<tr>
<td>3</td>
<td>Did the research involve animal experimentation? If YES, please certify that clearance was obtained from the Animal Ethics Committee. Clearance Number:</td>
<td></td>
</tr>
<tr>
<td>4</td>
<td>Did the research involve the use of human subjects? If YES, please certify that clearance was obtained from the relevant Ethics Committee. Clearance Number:</td>
<td></td>
</tr>
<tr>
<td>5</td>
<td>Did the research involve using genetically modified organisms or substances? If YES, please certify that clearance was obtained from the relevant Biosafety Review Board. Clearance Number:</td>
<td></td>
</tr>
<tr>
<td>6</td>
<td>ORCID Number:</td>
<td></td>
</tr>
<tr>
<td>7</td>
<td>Has this thesis/ dissertation/ research report been check for plagiarism?</td>
<td></td>
</tr>
</tbody>
</table>

Name of Supervisor (1): __________________________ Signature of Supervisor (1): __________________________

Name of Supervisor (2): __________________________ Signature of Supervisor (2): __________________________

Name of Head of School/Designate: __________________________________________________________

Signature of Head of School/Designate: _________________________________________________________

Date: ______________________________________________

Supervisor/s please note:

Submission of a supervisor's report

Once a candidate submits her/his thesis/dissertation/research report for examination to the Faculty, the supervisor must submit a supervisor's report to the Faculty Registrar. The supervisor's report is not an examiner's report. It will be used by the Faculty Graduate Studies Committee for the quality assurance of supervision, and for insight into the relationship between the Supervisor's assessment and that of the examiners. This report will not be seen by the examiners, but if requested by the candidate, it will be given to the candidate along with the examiners' reports, once the examination process is complete.

Contact Details for Postgraduate Administration, Faculty of Science:

Email: science.msc@wits.ac.za or science.phd@wits.ac.za

(Updated in 2017 and approved by the Science Faculty Board on 11 October 2017)
Faculty of Science
Division of Postgraduate Academic Management

Supervisor's report on submission of their Candidate’s Masters Dissertations or Doctoral Theses

This report is not an examiner's report. It will be used by the Faculty Graduate Studies committee for the quality assurance of supervision and for insight into the relationship between the supervisor's assessment and that of the examiners. This report will not be seen by the examiners but it will be given to the candidate along with the examiners' reports, once the examination process is complete.

Supervisors should report on the supervision process

i. The supervisor should comment on the supervision process (frequency of meetings, any difficulties in the relationship, time frames, number of drafts etc.);

ii. There should be an assessment of the candidate's ability to work independently at the different stages of the project: selection of the topic, the literature review, data collection and data analysis;

iii. The supervisor should report on the conferences attended by the candidate and the candidate's publications;

iv. In the case of joint publications there should be a clear statement of what work was done by each of the authors of each joint publication included in the dissertation or thesis; and

v. The supervisor should draw to the Graduate Studies Committee's attention to any personal difficulties experienced by the candidate (death in the family, illness etc).

Supervisors should briefly assess the quality of the dissertation or thesis. This assessment should include:

i. An assessment on the quality of the language and presentation;

ii. An assessment of the contribution that the research makes to knowledge in the field; and

iii. An assessment of the standard of the work.
Faculty of Science
Division of Postgraduate Academic Management

Supervisor's Report on submission of their candidate’s Thesis/ Dissertation / Research Report

<table>
<thead>
<tr>
<th>Candidate Name:</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Person No:</td>
<td>Degree:</td>
</tr>
<tr>
<td>Title of Thesis/ Dissertation/ Research Report:</td>
<td></td>
</tr>
<tr>
<td>Name of Supervisor / Co/Supervisor :</td>
<td></td>
</tr>
<tr>
<td>Name of Supervisor / Co/Supervisor :</td>
<td></td>
</tr>
</tbody>
</table>

A. Report on the Supervision Process

1. Supervision process:
   - Frequency of meetings:
   - Difficulties in the relationship:
   - Time frames:
   - Number of drafts:

2. Student’s ability to work independently
   - Selection of the topic:
   - Literature review:
   - Data collection and Data Analysis:

3. Conferences attended by the student and publications
   - Conferences:
   - Publications:

4. Student background
   - Personal difficulties experienced by the student:

B. Quality of the Thesis/ Dissertation/ Research Report:

   - Language and presentation:
   - Contribution to knowledge in the field:
   - Standard of the work:

UNIVERSITY OF THE WITWATERSRAND, JOHANNESBURG
SENATE STANDING ORDERS ON HIGHER DEGREES (S2009/2361A)
A.20 Submission of thesis
All theses that are submitted must be accompanied by a Supervisor’s report.
The Supervisor’s report is not an examiner’s report. It will be used by the Faculty Graduate Studies Committee for the quality assurance of supervision, and for insight into the relationship between the Supervisor’s assessment and that of the examiners.

(Updated in 2017 and approved by the Science Faculty Board on 11 October 2017)
This report will not be seen by the examiners, but it will be given to the student along with the examiners’ reports, once the examination process is complete.
The Faculty Officer receives a report from each examiner. When all examiners’ reports are received the Faculty Officer email a thank you letter to each examiner. The Faculty Officer updates the student’s record on SIMS and updates the information on the spreadsheet to track the progress of examiners’ reports. When an external examiner’s report is received, the Faculty Office completes a claim sheet for payment to the external examiner and submits forms to salaries for processing.

Once all examiner reports are received, the Faculty Officer works with the GSC Chairperson to prepare a recommendation to the GSC. The GSC Chairperson will recommend circulation for approval of examiners’ reports or an ad hoc committee meeting if there is a discrepancy in the examiners’ reports. The Faculty Officer will either arrange an ad hoc committee meeting or e-mail the examiners’ reports and recommendation to the GSC for approval. The Faculty Officer removes all identifying information pertaining to each examiner prior to circulation to the GSC for approval or comment. The Faculty Officer collates the responses. A two-thirds approval from the GSC is required before further processing can take place.

The Faculty Officer e-mails the recommendation from the GSC and the detailed report received from each examiner to the Supervisor and GSC representative of relevant School. The Supervisor contacts the candidate to convey the outcome and final submission procedure.

The supervisor works with the student to complete all corrections. Once corrections are complete the supervisor, student and Head of School or GSC representative must ensure all corrections have been completed. In this regard the student must generate a report detailing how corrections recommended by the examiners have been addressed.

Senate Standing Orders on Higher Degrees state that the examiners should not be contacted until the entire examination process is completed (that is when the candidate submits the approved, corrected and final version to the Faculty). However, supervisors in consultation with the school’s GSC representatives can contact the each examiner for clarification when they believe that this contact will result in a better quality piece of research work being submitted. In the case when examiners have indicated that they wish to re-examine the work then contact should not take place or be kept to a minimum. The GSC Chairperson or Dean should be informed of any correspondence with an examiner.

PLEASE NOTE

SENATE STANDING ORDERS ON HIGHER DEGREES
A34 REVISION

Candidates are entitled to appropriate supervision while revising theses in response to examiners’ reports. Revision shall be done within a maximum period of six months, unless application for a further extension is supported by the Faculty Graduate Studies Committee. Faculties will not require candidates to pay additional fees if revision is completed within three months. Beyond that, candidates will be required to pay all fees. Failure to submit at the end of the period allowed for revision may result in termination of candidature.

(Updated in 2017 and approved by the Science Faculty Board on 11 October 2017)
Information for the Guidance of Examiners for the Degree of Master of Science (Coursework and Research Report)

1. Qualification of Candidates
A candidate for this degree has, as a rule, obtained an Honours or equivalent qualification. The candidate has attended and completed by examination during not less than one academic year, such postgraduate courses as determined by the Senate and has presented a Research Report on an approved topic.

2. Requirements for the Award of the Degree
Both the marks awarded for the coursework and that awarded for the Research Report contribute to the final mark for the degree. Courses must be completed at the first attempt. The Research Report you are asked to examine counts 50% of the total mark. The Research Report must show acquaintance with the methods of research but need not involve original research. Please note that the work for the Research Report is normally carried out over a period of six to seven months, which includes the write-up. This MSc Research Report is not equivalent to an MSc dissertation which would take a minimum of one year full-time research and be submitted by candidates as the sole requirement for the award of an MSc degree.

2.1 Acquaintance with the Methods of Research
The candidates are required to show acquaintance with the methods of research in that they:
   i. Understands the nature and purpose of the investigations;
   ii. Are sufficiently acquainted with the relevant literature;
   iii. Have mastered the necessary techniques;
   iv. Have acquired a thorough understanding of the scientific method; and
   v. Are capable of assessing the significance of the findings.

2.2 Literary Style and Presentation
The literary style and presentation of the Research Report must be satisfactory.

2.3 Pass and Distinction
A pass for the Research Report is 50%. A candidate obtaining 75% or more will be awarded the degree with distinction. (A distinction must be obtained for both the Coursework component and for the Research Report for the degree to be awarded with distinction.)

2.4 Plagiarism
The candidate’s submission for examination has been checked for plagiarism. If the plagiarism exceeds 15%, the supervisor of the student is required to submit a motivation to the faculty with the plagiarism report.

3. Examiners’ Recommendations
Examiners are requested to indicate their recommendations by completing the Examiner’s Report form and compiling a separate written report. Kindly assign a percentage mark to the Research Report. In the section detailing your assessment of the Research Report, please make clear any corrections, revisions or extensions you may require. As a rule the correction of typographical and other minor errors as recommended by the examiner is supervised by the candidate’s supervisor and completed to the satisfaction of the Head of the relevant School.

4. Confidentiality during the Examination Process
The examination process commences once an examiner accepts her/his nomination to examine. The names of the examiners are confidential during the examination process and may only be revealed to the candidate with the acquiescence of the examiner once the final version of the thesis has been submitted to the Faculty and the process has been completed. An examiner shall not consult another examiner, the supervisor or candidate except by permission of the Dean, usually in response to a request for further information, until the examination process is completed.

5. Deadline for Return of Report
An examiner is requested to return the examiner’s report within 6 weeks. If you are unable to do so, kindly email science.msc@wits.ac.za

6. Examiners should note that at this University candidates have the right to submit their Research Report without the permission of the supervisor.
Faculty of Science  
Division of Postgraduate Academic Management

Information for the Guidance of Examiners for the Award of Master of Science by Dissertation

1. Qualification of Candidates
A candidate for this degree has, as a rule, obtained an Honours or equivalent degree and during no less than one academic year has conducted research under the guidance of a supervisor appointed by the Senate.

2. Requirements for the Award of the Degree
A person who is admitted as a candidate for the degree must present a dissertation on a subject approved by the Senate. The degree is usually awarded solely on the dissertation, which must show acquaintance with the methods of research but need not involve original or publishable research.

2.1 Acquaintance with the Methods of Research
The candidates are required to show acquaintance with the methods of research in that they:
   i. Understand the nature and purpose of the investigations;
   ii. Are sufficiently acquainted with the relevant literature;
   iii. Have mastered the necessary techniques;
   iv. Have acquired a thorough understanding of appropriate scientific methods; and
   v. Are capable of assessing the significance of the findings.

2.2 Literary Style and Presentation
The literary style and presentation of the dissertation must be satisfactory.

2.3 Consultation/Assistance
Candidate shall have the right to consult anyone whom they may choose concerning aspects of the dissertation. Such assistance received by candidates shall not invalidate the declaration that the dissertation constitutes their own work. However candidates shall in the dissertation acknowledge by name those to whom they are indebted for substantial assistance.

2.4 Plagiarism
The candidates submission for examination has been checked for plagiarism. If the plagiarism exceeds 15%, the supervisor of the student is required to submit a motivation to the faculty with the plagiarism report.

3. Examiner’s Recommendations
Examiners are requested to indicate their recommendations by completing the Examiner’s Report Form and compiling a written report. In the section detailing your assessment of the dissertation, please make clear any corrections, revisions or extensions you may require. As a rule the correction of typographical and other minor errors as recommended by the examiner is supervised by the candidate’s supervisor and completed to the satisfaction of the Head of the relevant School.

   a. Format of Examiner’s Report:
      i. Give a brief description of the dissertation;
      ii. Give an analysis of the work performed; and
      iii. An appraisal of the dissertation.

   b. Award with Distinction
   Where the dissertation is of outstanding merit the degree may be awarded with distinction. Originality would normally be relevant to such a judgment but is not the sole requirement for the award with distinction. Examiners are requested to motivate for the award of a distinction in their detailed report and in the space provided on the report form.

   c. Implementation of Recommendation or Alterations
   An examiner who recommends that the dissertation be referred back to the candidate for major alterations must indicate clearly what is to be done by the candidate. If the examiner feels that the candidate should be asked to defend the dissertation before an ad hoc Committee the examiner should indicate on what aspects the discussion should concentrate. Provision of a list of specific questions would assist the Committee.
   As a rule the correction of typographical and other minor errors as recommended by the examiners is supervised by the supervisor and completed to the satisfaction of the Head of the relevant School.

4. Confidentiality During the Examination Process
The examination process commences once an examiner accepts her/his nomination to examine. The names of the examiners should be confidential during the examination process and may only be revealed to the candidate with the acquiescence of the examiner once the final version of the thesis has been submitted to the Faculty and the process has been completed. An examiner shall not consult another examiner,
supervisor or candidate except by permission of the Dean, usually in response to a request for further information, until the examination process is completed.

5. **Deadline for Return of Report**
An examiner is requested to return the examiner’s report within 6 weeks. If you are unable to do so, kindly email **science.msc@wits.ac.za**.

6. **Examiners should note that at this University candidates have the right to submit their dissertation without permission of the supervisor.**

Contact Details for Postgraduate Administration, Faculty of Science:
Email: **science.msc@wits.ac.za** or **Rene.Vosloo@wits.ac.za**  Tel:  +27(0) 11 7176014
Faculty of Science
Division of Postgraduate Academic Management
Information for the Guidance of Examiners for the Degree of Doctor of Philosophy

1. Qualification of Candidates
   The normal minimum requirements for this degree are that a candidate shall hold a Masters’ degree or equivalent qualification. The candidate should have conducted research on a subject approved by the Senate, under the guidance of a supervisor appointed by the Senate, either in the University or an institution deemed to be part of the University for this purpose, for at least two academic years.

2. Requirements for the Award of the Degree
   At the close of the period of research the candidate has to present a Thesis which must constitute a substantial novel contribution to the advancement of knowledge in the subject chosen and which must be satisfactory as regards literary presentation and in a form suitable for lodging in the University Library. The substance of the Thesis is normally required to be of a standard suitable for publication.

2.1 Previously Published Work
   When presenting the Thesis, a candidate may include published results or publications, provided that this work was undertaken during the course of the candidature. In the case of joint publications also included, the candidate’s share in such work must be indicated.

2.2 Consultation/ Assistance
   Candidate shall have the right to consult whom they may choose on aspects of the thesis. Such assistance received by candidates shall not invalidate the declaration that the thesis constitutes their own work. However, candidates shall, in the thesis, acknowledge by name those to whom they are indebted for substantial assistance.

2.3 Plagiarism
   The candidate’s submission for examination has been checked for plagiarism. If the plagiarism exceeds 15%, the supervisor of the student is required to submit a motivation to the faculty with the plagiarism report.

3. Examiner’s Recommendations
   Examiners are requested to indicate their recommendations by completing the Examiner’s Report form and compiling a written report. In the section detailing your assessment of the Thesis, please make clear any corrections, revisions or extensions you may require. As a rule the correction of typographical and other minor errors as recommended by the examiner is supervised by the candidate’s supervisor and completed to the satisfaction of the Head of the relevant School.

3.1 Format of Examiner’s Report
   i. Give a brief description of the Thesis;
   ii. Give an analysis of the work performed; and
   iii. An appraisal of the Thesis.

   No provision is made for the award of the degree of PhD with distinction.

3.2 Implementation of Recommendations or Alterations
   An examiner who recommends that the Thesis be referred back to the candidate for major alterations must indicate clearly what is to be done by the candidate. If the examiner feels that the candidate should be asked to defend the thesis before an ad hoc committee the examiner should indicate on what aspects the discussion should concentrate. Provision of a list of specific questions would assist the Committee. As a rule the correction of typographical and other minor errors as recommended by the examiners is given by the supervisor and completed to the satisfaction of the Head of the relevant School.

4. Confidentiality during the Examination Process
   The examination process commences once an examiner accepts her/his nomination to examine. The names of the examiners should be confidential during the examination process and may only be revealed to the candidate with the acquiescence of the examiner once the final version of the thesis has been submitted to the Faculty and the process has been completed. An examiner shall not consult another examiner, the supervisor or candidate except by permission of the Dean, usually in response to a request for further information, until the examination process is completed.

5. Deadline for Return of Report
   An examiner is requested to return the examiner’s report within 6 weeks. If you are unable to do so, please e-mail science.phd@wits.ac.za

6. Examiners should note that at this University candidates have the right to submit their Thesis without the permission of the supervisor.

Contact Details for Postgraduate Administration, Faculty of Science:
Email: science.phd@wits.ac.za or Rene.Vosloo@wits.ac.za

(Updated in 2017 and approved by the Science Faculty Board on 11 October 2017)
Please Note

Senate Standing Orders on Higher Degrees:

A.23 Registration after submission of thesis, dissertation, research report
Candidate who have submitted their thesis, dissertation, research report are required to remain registered until they have met all the requirements for the degree. If the Faculty Graduate Studies Committee or Board of the Faculty decides that substantial revisions to the thesis are required, then the candidate will be liable for a re-examination fee, as per A.33.3.3 of these Standing Orders. Subject to the approval of the Chairperson of the Faculty Graduate Studies Committee, candidates may be permitted to register for a further higher degree while awaiting the outcome of the examination for another higher degree.

A34 Revision
Candidates are entitled to appropriate supervision while revising theses, dissertations, and research reports in response to examiners’ reports. Revision shall be done within a maximum period of six months unless application for a further extension is supported by the Faculty Graduate Studies Committee. Faculties will not require candidates to pay additional fees if revision is completed within three months. Beyond that candidates will be required to pay all fees. Failure to submit at the end of the period allowed for revision may result in termination of candidature. If examiners have requested to re-examine the work, an additional fee is levied.

Candidates submit to the Faculty:

i. A completed final submission form;
ii. A letter from head of school or GSC representative indicating corrections were done to her/his satisfaction;
iii. A detailed list of how the corrections were addressed;
iv. 2 unbound copies of the thesis/dissertation/research report;
v. A cd containing a pdf of the thesis/dissertation/research report; and
vi. Proof of payment of ETD and a fees clearance. The Faculty Officer issues a proof of receipt to the candidate. Forms are available from the Faculty of Science reception or can be downloaded from http://www.wits.ac.za/academic/science/postgraduate/13911/final_submission.html

Please note: Fee refunds are only applicable to candidates who have completed the degree in the Wits required time.

The Faculty Registrar finalises the qualification on the system. A congratulatory letter and an academic transcript are emailed to the candidate. The candidate’s name is added to the next graduation ceremony. The candidate can expect correspondence from the examinations and graduations office four weeks prior to the graduation ceremony.

Candidate Name : ____________________________________________
Person Number  : ____________________________________________
Degree         : ____________________________________________

Checklist

<table>
<thead>
<tr>
<th>Item</th>
</tr>
</thead>
<tbody>
<tr>
<td>2 unbound copies of the thesis/ dissertation/ research report</td>
</tr>
<tr>
<td>with current date and signed declaration with current date</td>
</tr>
<tr>
<td>1 CD with a PDF of the thesis/ dissertation/ research report</td>
</tr>
<tr>
<td>Final submission form</td>
</tr>
<tr>
<td>Letter from the Head of School</td>
</tr>
<tr>
<td>ETD payment (check final submission form)</td>
</tr>
<tr>
<td>Fees statement (fees must be settled)</td>
</tr>
<tr>
<td>List of corrections</td>
</tr>
</tbody>
</table>

A final submission will not be accepted if any of the above are not received

(Updated in 2017 and approved by the Science Faculty Board on 11 October 2017)
File: T4gen

FINAL SUBMISSION OF THESIS, DISSERTATION OR RESEARCH REPORT/PROJECT
(Unbound and Electronic Copies)

Faculty of

School of

Submission of M Dissertation or M Research/ Project Report or PhD Thesis (Note: This form should only be completed at final submission of dissertation or research/project or thesis)

PLEASE WRITE CLEARLY IN BLOCK LETTERS (If completing form by hand)

1. Name (in full): ________________________________

2. Person Number: ________________________________

3. Present mailing address: ________________________________

Postal code:____________________________ Fax: ______________________________

E-mail:____________________________ Cell: ______________________________

Home tel:____________________________ Work tel: ______________________________

4. If you are likely to move in the next 6 – 12 months please provide the mailing address and effective date of a change in address

______________________________________________

______________________________________________

______________________________________________ Effective date: ________________

Contact telephone numbers: ______________________________

5. I hereby submit my M dissertation or M research/ project report or PhD thesis. (Delete whichever is NOT applicable)

5.1 If this is research for a Masters by Dissertation or PhD thesis, please provide your ORCID number ____________________

(Open Researcher and Contributor ID, ORCID, is an alphanumeric code to uniquely identify academic authors and contributors, it’s highly recommended that you register and provide this ID, to register or read more see http://orcid.org)

6. Number of unbound copies: ________

(Ensure that you have signed and dated all copies)

(Updated in 2017 and approved by the Science Faculty Board on 11 October 2017)
“Number of CDs: (Please note: an electronic version must be supported by a copy on CD for submission onto the Electronic Theses and Dissertation System (ETD): http://www.wits.ac.za/library/electronic-theses-and-dissertations-etd/5/electronic_theses_and_dissertations_etd.html. A payment of **R180** must be made at the Cashiers Office into the account code: 001.408.4221103.8115201 PROJECT: ETDW000, alternatively payment can be made at First National Bank, Braamfontein branch, account number 51360056499, branch code 251905, swift code: firnajja950. A copy of the payment receipt must be submitted to the faculty with the thesis/dissertation”

**Note:**
1. Only abstracts of awards with 50% or more as a research component must be submitted for uploading onto the ETD system. Please check with your Faculty Office if this applies to your submission.
2. All submissions will be uploaded onto the ETD system immediately upon the payment of the R180.

(CD should be clearly labelled with your name, person number, title of thesis and software package. The ETD system supports PDF only - please enquire at the University Library (Education and Training Division): (011) 717 1954 (tel) or (011) 717 1909 (fax) for assistance in converting your dissertation or research/project report or thesis if necessary)

7. I declare that:

7.1. I have checked all copies of my dissertation or research/project report or thesis and no pages are missing or poorly reproduced;

7.2. All revisions have been completed in accordance with the recommendations of the examiners;

7.3. The electronic copy is identical to the printed copy approved by the faculty;

7.4. The dissertation or research/project report or thesis complies with the rules relating to abstract and style, copies and formal declaration, duly signed by me, as shown in the General Rules of the University;

7.5. Where any document of which I am not the owner is included in my work, I have obtained and attach hereto the written consent of the holder of the intellectual property rights in such a document allowing distribution as specified in 7.7 below;

7.5.1. In the event of copyright permission not being obtainable for visual images or other works, I will not include the full work(s) in my online thesis/dissertation/research report on the ETD system, but undertake to point only to the source (by URL or other means) for such work(s);

7.6. I have properly acknowledged all sources; and

7.7. I have noted the rules relating to intellectual property and acknowledgement of the award of the programme as shown in the General Rules of the University and the University’s Intellectual Property Policy. Insofar as I hold intellectual property rights in my dissertation or research/project report or thesis, and to that extent only, I agree that the University and its agents may archive and make accessible to the public, upon such conditions as the University may determine, my dissertation or research/project report or thesis in its entirety in all forms of media, now or hereafter known.

8. Title of submitted dissertation/research report/thesis:

________________________________________________________________________

________________________________________________________________________

(Please Note: If, due to unforeseen circumstances, the above title has changed from your previously approved title, no further action can be taken by the Faculty Office until the amendment has been approved by the Faculty.)

8.1 Keywords:

________________________________________________________________________

________________________________________________________________________

________________________________________________________________________

(Updated in 2017 and approved by the Science Faculty Board on 11 October 2017)
9. I acknowledge that:

9.1. My dissertation or research/project report or thesis may be placed in the archive of electronic theses and dissertations. I acknowledge that it may be made electronically available in its entirety on the ETD system from four months after the date of submission unless permission for further embargo has been approved by the relevant Supervisor and communicated in writing by myself to the University Research Office, Library and Central Records Office *(see General Rule G19 which outlines embargo conditions)*:

The following files are on this CD *(please specify format)*:


9.2. The following parts of the work may be released immediately for electronic access worldwide:

*Only if an official embargo has been agreed to in terms of General Rule G19 will your abstract not be made available for the agreed period*

Abstract and key bibliographic data *(i.e. from submission form)*

9.3. I acknowledge that I am not entitled to the return of the copies of the dissertation or research/project report or thesis or other work I have submitted for the programme.

10. Did your research involve animal experimentation or the use of human subjects, human tissue or other material, or patient records?

☐ Yes

☐ No

If yes, please certify that clearance was obtained from the relevant, approved, University ethics committee:

Clearance number(s): ____________________________________________

11. I understand that I will not graduate unless my University fees have been paid in full.

12. I understand that if I am in material breach of any of the rules, terms and conditions governing the submission of a dissertation or research/project report or thesis at the University I may not graduate or it may result in the revocation of the awarded award.

13. The University is not responsible for the safekeeping of the information constituting a dissertation or research/project report or thesis. Should a student use the University’s ETD system for the keeping of a dissertation or research/project report or thesis in progress responsibility for the maintenance, security and back-up of such work lies with the student. The student absolves the University of any liability whatsoever for any loss/damage to a dissertation or research/project report or thesis and/or information contained in them howsoever it occurs. The student indemnifies and hold the University harmless against any claims or liability whatsoever for any loss or damage to a dissertation or research/project report or thesis and information gathered for that purpose or contained in any dissertation or research/project report or theses howsoever it occurs.

14. Name of supervisor: ____________________________________________

Discipline ______________________________________________________

School __________________________________________________________
The candidate must attach an original “Certificate To Accompany Higher Programmes Research Report” from his/her supervisor(s).

Is this dissertation or thesis supported by funding from (please tick):

- DST-NRF (e.g. CoE’s; SARChI Chairs; Innovation; African Origins Platform; Knowledge, Interchange and Collaboration; etc.) [Please underline the programme that applies]
- DST-CSIR (e.g. NEPTTP e-Research; etc.)
- Other: ___________________________ [Please list the full name of the funder]

Signature of candidate: ___________________________
Date: ___________________________
report or theses

☐ Written consent of holder of intellectual property rights included in the work attached - if applicable (refer to section 7.5)

☐ Embargo notification attached – if applicable (refer to section 9)

☐ Ethics Committee clearance number indicated - if applicable (refer to section 10)

☐ Original certificate of completion for dissertation or research/project report or thesis from the candidate’s supervisor(s) and Head of School attached (see section 14)

☐ Copy of this submission form and attachments included with copies sent to Central Records Office – for forwarding to Library. **Originals placed on student file.**

Faculty Officer: ___________________________ Date: ________________

FOR CENTRAL RECORDS OFFICE USE

☐ One unbound final, corrected hard copy of dissertation or research/project report or thesis forwarded to Library

☐ Final corrected copy in electronic format and receipt for ETD payment forwarded to Library

☐ Copy of this submission form included with dissertation or research/project report or thesis forwarded to Library

Central Records Office: ___________________________ Date: ________________

FOR LIBRARY USE

☐ Electronic version of dissertation or research/project report or thesis abstract activated on ETD

Library ETD Administrator: ____ Date: _
University of the Witwatersrand, Johannesburg

Faculty of Science

FACULTY STANDING ORDERS FOR THE DEGREES OF MSc AND PhD

These standing orders are intended to serve as guidelines for Supervisors, Heads of School, Postgraduate Coordinators and the Faculty Office. They should be read in conjunction with the Senate standing orders on higher degrees.

In the Faculty of Science, all Heads of Schools have appointed Postgraduate Coordinators to be responsible for higher degree matters within the School.

USE OF TERMS:
“School”: Unless indicated otherwise, “School” should be taken to include departments or divisions where these exist within Schools.
“Faculty Graduate Studies Committee (GSC)”: This is a Faculty Committee which deals with all matters pertaining to postgraduate studies.
“Faculty Registrar”: Where the term “Faculty Registrar” is used this may refer to the work carried out by a member of the Faculty Registrar’s staff, but the accountability will rest with the Faculty Registrar.
“Thesis”: is the term reserved for an extended piece of writing based on research that makes an original and significant contribution to knowledge that may incorporate creative work or publications integral to the overall argument, and is submitted in fulfilment of the requirements for the Doctor of Philosophy qualification.
“Dissertation” is the term reserved for a Master’s qualification by research, which is an extended piece of written work, which may incorporate creative work or publications.
“Research report” is the term reserved for the written document which forms the research component of a Master’s qualification by coursework and research report.
“Senior Doctorate” A significant body of work that makes a distinguished contribution to the advancement of knowledge in a field is required for the award of a senior doctorate.
“The Supervisor” is the person who takes primary responsibility for the supervision of the candidate, and is responsible for more than 50% of the supervision.
“The Co-Supervisor” is the person who is responsible for more than 10%, and less than 50% of the supervision of a candidate.
“Postgraduate Coordinator” is the person appointed by the Head of School who is responsible for postgraduate matters at School level.

INTRODUCTION
Higher degrees conferred in the Faculty of Science are PhD, MSc (Dissertation) and MSc (Coursework and Research Report). Candidates registering for an MSc (Coursework and Research Report) are expected to attend and pass an appropriate number of coursework courses counting 90 credits of the 180 credits. The curriculum for coursework shall extend over not less than one academic year of study.

1. APPLICATION FOR ADMISSION TO HIGHER DEGREE CANDIDATURE

Application forms are available from the Student Enrolment Centre (SENC) and online (http://www.wits.ac.za).

1.1 Application Form

An applicant can apply online or submit the hard copy to SENC. The application is then forwarded electronically to the Head of the School/Postgraduate Coordinator who will make a recommendation regarding admission. The application will thereafter be captured by the Faculty Office.

A Supervisor or Supervisors will normally be approved by the Head of School/Postgraduate Coordinator at the time of submission of the application form. For a Master’s (by dissertation) and PhD qualifications supervisors must give their consent to supervise the candidates.

(Updated in 2017 and approved by the Science Faculty Board on 11 October 2017)
1.2 Applicants from other Universities

Applicants are required to submit the following documentation together with the application form:

i. Certified photocopy(ies) of original degree certificate(s);
ii. Official academic record/transcript and certificate of good conduct; and
iii. Curriculum vitae.

1.3 Foreign candidate applications

Applicants are required to pay an application fee and submit the following documentation together with the application form:

i. Certified photocopy(ies) of original degree certificate(s);
ii. Official academic record/transcript and certificate of good conduct;
iii. Curriculum vitae;
iv. SAQA evaluation; and
v. Proof of English proficiency.

1.4 Recommendations by Heads of School

The Senate’s powers in respect of higher degree matters have largely been delegated by the Faculty Board to the Graduate Studies Committee (GSC) which, in turn, relies heavily on the recommendations of the Heads of School/Postgraduate Coordinators.

Heads of School are under no obligation to recommend the admission of any person who wishes to prosecute research for a higher degree – the fact that an applicant may be qualified for admission in terms of the rules is NOT in itself grounds for admission. Only those applicants found to be satisfactory in all respects should be recommended to the GSC. This includes the appointment of Supervisors for Master’s (dissertation) and PhD applicants.

The Head of School/Postgraduate Coordinator and the Supervisor should consider the following points whilst making a decision:

a) Qualifications and Capabilities of Applicant:

i. The applicant should have the necessary academic qualifications, in terms of the rules, for admission to the candidature which he seeks. An applicant for admission as an MSc candidate is usually expected to have at least 65% at Honours level. A candidate with a first class pass at the Honour’s level may register directly for a PhD with the approval of the Head of School; and

ii. The applicant should have the necessary training and background and the intellectual ability to carry out the research project.

b) Adequacy of Research, Research Facilities and Supervision:

i. The proposed research should show clear promise of a sufficient contribution to knowledge to fulfil the requirements of the degree concerned;

ii. The proposed research should be feasible – i.e. Adequate laboratory and/or library facilities should exist, and the requisite research materials or data should be readily accessible; and

iii. Effective and appropriate supervision should be available for the minimum period of registration.

2. REGISTRATION AND RENEWAL OF REGISTRATION

2.1 Initial Registration

A candidate for a Higher Degree in the Faculty of Science is required to register after the application is approved by the Head of School/Postgraduate Coordinator.

(Updated in 2017 and approved by the Science Faculty Board on 11 October 2017)
2.2 Renewal of Registration

All candidates are required to renew their registration **annually**. Candidates who have submitted their research are required to remain registered until they have been **qualified**.

2.3 Lapse of Registration

It is the responsibility of the Faculty Registrar to ensure that all candidates are duly registered, and to report unregistered candidates to the Head of School or Postgraduate Co-ordinator. The Head of School or Coordinator shall then investigate, through the Supervisors, the reasons for non-registration. Any candidate not registered by the end of March, provided that they are in good standing, will be assumed to have allowed their registration to lapse and will be required to apply de novo.

2.4 Minimum and Maximum Periods of Registration

A FULL-TIME candidate is a candidate who is working full-time on her/his research.

A PART-TIME candidate is normally in other full-time or part-time employment.

A member of the University staff may register as a full-time candidate. This decision should be made in consultation with the Head of School and should be related to the actual time spent carrying out research.

The normal minimum and maximum periods of registration are as follows:

<table>
<thead>
<tr>
<th>Degree</th>
<th>Minimum (n) HEQSF</th>
<th>Wits (n+1)</th>
<th>Maximum</th>
</tr>
</thead>
<tbody>
<tr>
<td>MSc (Full-time)</td>
<td>1 year</td>
<td>2 years</td>
<td>3 years</td>
</tr>
<tr>
<td>MSc (Part-time)</td>
<td>1 year</td>
<td>3 years</td>
<td>4 years</td>
</tr>
<tr>
<td>PhD (Full-time)</td>
<td>2 year</td>
<td>3 years</td>
<td>4 years</td>
</tr>
<tr>
<td>PhD (Part-time)</td>
<td>2 year</td>
<td>4 years</td>
<td>5 years</td>
</tr>
</tbody>
</table>

A candidate exceeding the maximum period of study will incur a penalty fee. The fees of candidates exceeding the maximum period of study will escalate by 20% for each additional year.

3. EXTENSIONS

Extensions should be the exception rather than the rule. Only **TWO** extensions are permissible for the entire duration of Master’s and PhD Degrees. Extensions can be approved by the GSC either during the research proposal preparation stage, or to extend the period of registration. Once candidates have completed n+1 years of study, they must apply for an extension to the Faculty GSC, which will not be granted unless there is a convincing motivation and a realistic timeline for completion of the Degree which is approved by both the supervisor and the Head of School. A hold will be placed on online registration at the end of the n+1 period so that this can be facilitated. After n+2 years candidates will not be allowed to re-register in the Faculty without the recommendation of the GSC and the permission of the Dean. Students will not be allowed to extend their registration beyond n+3.

Extensions can be applied for by completing the Faculty Amendment Form.

4. CONVERSION OF CANDIDATURE FROM MSc TO PhD IN TERMS OF RULE G 12.2 (a)

4.1 In the case of an MSc (dissertation) candidate who has been registered for twelve months or longer, the GSC may be asked by the Supervisor to consider whether the candidate’s progress in research warrants conversion of candidature to PhD.

4.2 If the Supervisor(s) recommends conversion, the Head of the School/Postgraduate Coordinator concerned must submit a motivation, as well as a PhD proposal which has been approved by the School, to the GSC, for the consideration of the conversion.

The motivation should be based on answers to the following questions:

i. Is the candidate of PhD calibre?

ii. Is the research project of PhD standard?

iii. Does the candidate show independent and original thought and strong motivation towards the research?

iv. Reference should be made to any relevant papers published or presented at conferences by the candidate.

4.3 If the conversion of a candidature from MSc to PhD is approved, the candidate shall be deemed to have commenced the research for the PhD at the time of her/his admission as a candidate for the degree of MSc, or such
later date as the Senate may determine in her/his case. In terms of Rule G 12.2 (a), the Master’s Dissertation is neither written nor submitted for examination.

5. **CONVERSION OF CANDIDATURE FROM MSc TO PhD IN TERMS OF RULE G 12.2 (b)**

5.1 If a candidate wishes to convert her/his candidature in terms of Rule G 12.2 (b), then a motivation as set out in 4.2 above must be submitted to the GSC before being qualified for the MSc Dissertation. In terms of Rule G12.2 (b), the Master’s Dissertation is both written and submitted for examination.

5.2 **Date of PhD Registration**

i. Candidates admitted in terms of Rule G12.2 (b) shall register for PhD degrees at the time they submit their MSc dissertation to the Faculty Office.

ii. If the Examiners’ reports on the MSc dissertation are favourable, and the GSC agrees that the candidate may proceed to the degree of PhD, the candidature shall be confirmed.

iii. If the Examiners’ reports are unfavourable, the PhD candidature shall not be confirmed.

5.3 **Format of PhD Thesis**

The entire project shall be incorporated in an integrated form for the PhD thesis and not submitted as separate volumes (i.e. the MSc dissertation plus the results of the extended research in another volume).

5.4 **External Examiners of PhD Theses**

The same external Examiner shall not normally be appointed to examine the MSc dissertation and the PhD thesis. In the case where the same Examiner is appointed, a strong motivation must be submitted to the GSC.

6. **ITEMS FOR CONSIDERATION BY THE GSC**

6.1 All matters relating to Master’s and Doctoral degrees must be approved by the GSC or, in urgent and controversial cases, the Board of the Faculty of Science, or the Senate.

All higher degree matters, such as applications for admission to candidature, approval of research proposals, nomination and approval of Examiners, approval and changes of Supervisor(s), extension of candidature, cancellation of candidature, requests for abeyance, conversions, changes in registration such as title or line of research, or approval of examiners’ reports, must be submitted for approval to the GSC. Applications or requests will not normally be considered unless they are recommended in writing by the Head of the School/Postgraduate Coordinator concerned and have the support of the Supervisor/s. The minutes of the GSC meetings form part of the Faculty Board documentation.

6.2 **Approval of Title**

Candidates should not submit their thesis/dissertation/research report before the final title of the thesis/dissertation/research report has been approved by the GSC.

6.3 **Abeyance**

This is applicable to all Master’s and PhD candidates. In exceptional circumstances candidates may apply to have their candidature put into abeyance, i.e. where their circumstances prevent them from continuing their research. The maximum period of abeyance is two years (non-continuous). Abeyance must be for a pre-specified length of time. If candidates do not apply for re-instatement before the abeyance period expires, their candidature will be cancelled.

6.4 **Closing date for receipt of applications and other items for consideration by the GSC**

The deadline for receipt by the Faculty Office of applications and other items for consideration by the GSC is 10 working days before the date of each GSC meeting. Any urgent matters may be circulated to members of the GSC.

7. **SUPERVISION**

7.1 **Duties of Supervisors**

It is the responsibility of the Head of School or Postgraduate Co-ordinator to ensure that a Supervisor is familiar with the University’s and Faculty’s Standing Orders on higher degrees. These duties are available from the Faculty Registrar. A copy of these duties (and/or relevant code of responsibility/conduct) along with the appropriate Style Guide, the Policy on Plagiarism and the University Grievance Procedure for Postgraduate Students and the Statement of Principles must be made available to students at registration, and should form the basis of a negotiation between the Supervisor/s and the candidate as to how they will work together.
The Statement of Principles must be discussed with the student and it may be changed by mutual agreement. It must be signed by the Supervisor(s) and the student at the time of submission of the research proposal.

The duties of the Supervisor shall be:

7.1.1 To report, after consultation with the Head of the School or Postgraduate Co-ordinator concerned, any change in the proposed title for the approval of the Faculty Board, Faculty GSC, panel, or Chairperson of the Faculty GSC.

7.1.2 To assist the candidate’s research in all possible ways the Supervisor should take care to encourage the candidate to use her/his own initiative, and should not watch over every detail of the work. S/he should rather make suggestions wherever necessary, and encourage the candidate to apply them.

7.1.3 Supervision entails both oral advice on the candidate’s research, and constructive written comments on drafts of the proposal and on draft chapters. A record of the supervision process must be kept by the Supervisor.

7.1.4 To ensure that the candidate knows the conventional techniques of presentation for a research report/dissertation/thesis.

7.1.5 To ascertain the cause should the candidate, for any reason, fail to make adequate progress. If the candidate is at fault and does not, after a written warning, make better progress, the Supervisor shall bring the matter to the attention of the Head of School or Postgraduate Co-ordinator. Any further instruction which emanates from this should also be in writing and, if it in turn is not acted on by the candidate, the matter should be brought to the attention of the Faculty GSC which may at that stage instruct cancellation of registration. It is essential that a candidate be given the opportunity to put forward her/his case at all stages of this process before cancellation is decided upon by the Committee. In cases where there is more than one Supervisor, the Supervisors shall consult one another on the progress of the candidate at regular intervals.

7.1.6 To report once a year to the Faculty GSC, or its Chairperson, on the progress of the candidate’s work. The dates will be decided by each Committee and the basis of the Supervisor’s report will be a yearly report from the candidate. A very brief report will suffice if the candidate’s progress is satisfactory. The report must be an open one and signed by the Supervisor, the candidate and the Head of School or Postgraduate Co-ordinator. The form should contain provision for comments by the candidate. The Chairperson may draw the Committee’s attention to particular cases and the Committee may call for more frequent reports in a particular case. The Faculty Registrar is required to monitor the submission of reports and to ensure that copies of these reports are filed on the student’s file.

7.1.7 To draw the attention of the candidate to the minimum and maximum periods of study for the degree.

7.1.8 To nominate Examiners, in consultation with the Head of School, a minimum of three months prior to the submission of the research report/dissertation/thesis. At this point, the title must be confirmed.

7.1.9 To inform the candidate of any planned absences.

7.2 Supervision of one candidate by another

7.2.1 Normally, a candidate for a higher degree who is appointed to supervise another candidate for a higher degree will be a member of the staff of the University.

7.2.2 A member of staff, who is registered for a higher degree, is permitted to supervise another candidate at a lower level, or co-supervise a candidate at an equivalent level, provided that the Supervisor holds a degree at the equivalent level.

7.2.3 Two candidates at the same level may not supervise or co-supervise each other.

7.3 Responsibilities of the candidate

7.3.1 The Statement of Principles must be discussed with the Supervisor(s), and must be signed by the student and the Supervisor(s), and submitted together with the research proposal to the Faculty Office.

7.3.2 The candidate should meet as frequently as agreed with the Supervisor, and shall, at these meetings, present a detailed account, in writing, of her/his progress, in a manner as is acceptable to the field of study being pursued.

7.3.3 The candidate shall take into account all written and oral advice given by the Supervisor, and provision should be allowed for adequate, mutually respectful discussion around these recommendations.

7.3.4 The candidate must ensure that the appropriate literature directly pertinent to her/his chosen topic has been identified and consulted. The candidate has a reasonable expectation that the Supervisor keep abreast with developments in her/his own area of expertise.

7.3.5 Once the focus/area of research is approved, the candidate is responsible for ensuring that the research remains focused on the agreed areas or, where substantive changes are necessary, that these are agreed by the candidate and Supervisor, and reported appropriately to the Faculty GSC. It should be noted that there should be appropriate consultation with the Supervisor with respect to changes, especially where these may lead the work outside of the field of expertise of the Supervisor.

7.3.6 The candidate must obtain the agreement of the Supervisor for any absences.

7.3.7 The candidate must produce a written document for examination that meets the requirements of the degree being pursued.

7.3.8 The candidate must make adequate progress to enable the successful completion of the degree within the stipulated time frame.

(Updated in 2017 and approved by the Science Faculty Board on 11 October 2017)
7.3.9 The candidate must bring problems in the supervision relationship to the attention of the Supervisor. In the first instance and, if such problems are not resolved, to bring the matter to the attention of the Head of School or Postgraduate Co-ordinator.

7.3.10 The candidate must comply with all administrative processes, including making the necessary declarations with respect to the work complying with the policies on ethics, plagiarism and intellectual property.

7.3.11 The candidate shall submit a progress report to the Faculty annually. The Faculty Registrar is required to monitor the submission of reports and to ensure that copies of these reports are on the student’s file.

7.4 Absence of a Supervisor

A Supervisor of a higher degree candidate who is granted leave of absence for more than six months from the University shall, through the relevant Head of School, inform the Faculty Office what arrangements are to be made for the candidate’s supervision during period of absence. These arrangements may be subject to approval by the GSC.

7.5 External Supervision

In terms of the Senate standing orders, supervision by a member of staff of another University, or by a member of staff of a research organisation or industry, must be motivated for and approved by the GSC.

7.6 Appointment of Co-Supervisors

The appointment may take place in the following circumstances:

7.6.1 Where a Supervisor proposed for a new candidate is due to retire in a year or less;

7.6.2 Where a proposed Supervisor is supervising a higher degree candidate for the first time;

7.6.3 Where an external Supervisor is appointed, in which case the principal Supervisor must be from the relevant School at this University;

7.6.4 Where a valid case can be made for a particular research topic (e.g. in an interdisciplinary area of research) which includes aspects of two different fields of study; and

7.6.5 Co-supervisors of a higher degree candidate are required to consult each other at regular intervals concerning the progress of their candidate.

7.7 Changes in Supervision

Any change in Supervisory arrangements for a candidate must be approved by the GSC. The Head of the School/Postgraduate Coordinator concerned should submit brief reasons for the change.

8. MATTERS RELATING TO CANDIDATURE

Procedure is to be followed when higher degree candidates are approaching the maximum permitted period of registration.

The normal maximum periods allowed for completion of higher degrees are set out in item 2.4.

8.1 A system generated email is sent to all candidates and their Supervisors who are approaching the end of the registration asking them to report on their progress and state when they are likely to submit the thesis/dissertation/research report.

Depending on the candidates’ reaction, one of the following results:

i. Candidates submit their thesis/dissertation/research report within the required period.

ii. Candidates, supported by their Supervisors and the Heads of the School/Postgraduate Coordinators, apply for extension of their registration for a maximum period of one year. Extension requests will be granted only in exceptional circumstances.

iii. Candidates, supported by their Supervisors and Heads of the School/Postgraduate Coordinators, request the Faculty to place their candidature in abeyance for a maximum period of two years (non-continuous – see 6.3).

iv. In the case of the candidates not responding, they may be informed by email that their candidature will be terminated. Candidates have the right to appeal to the Dean of the Faculty.

8.2 Candidates whose candidatures have been extended should be reminded by the Faculty Office that they are required to submit before the end of the extension period.

Depending on the candidate’s response, one of the following results:

i. The candidate submits her/his thesis/dissertation/research report.

ii. In exceptional circumstances, if the maximum period of candidature plus the extension period of one year has expired, the candidate, strongly supported by the Supervisor and the Head of the School/Postgraduate Coordinator, requests the GSC to allow one further extension or to place her/his candidature in abeyance.

iii. The candidature is terminated.

8.3 A person whose candidature has been placed in abeyance should be informed by the Faculty Office that the period of abeyance is about to end.
Depending on the candidate’s reaction, one of the following results:

i. Reinstatement may be applied for and granted; in this case the thesis/dissertation/research report must be submitted within three months of the date of re-instatement. Only in very exceptional circumstances would a candidate be granted an extension;

ii. Reinstatement is not applied for and the candidature is terminated.

8.4 In all cases of termination of candidature, the candidate will be advised that if, at a future date, he is able to provide evidence of completion of her/his thesis/dissertation/research report (in particular by giving the Supervisor a draft thesis which meets the requirements of the degree) he may apply to the Faculty for reinstatement.

The candidate should also be advised that other candidates may well undertake research in the field of the thesis/dissertation/research report topic, so that the results obtained by the candidate may become outdated and no longer satisfy the requirements for the higher degree. In such exceptional circumstances, if the Faculty agrees to reinstatement, the candidate will be required to pay the accumulated fees for the period between the date of termination and the date of reinstatement.

If the candidature is terminated by the Faculty, the candidate shall have the right to appeal against this decision, but the GSC will only support such appeals if there are very exceptional circumstances.

i. Reinstatement would be for a maximum period of six months; and

ii. A candidate is only allowed to appeal once against termination.

9. SUBMISSION OF RESEARCH PROPOSAL

All candidates are required to prepare a carefully written and argued research proposal in which they are advised, amongst other things, to:

i. Supply a title (this should be brief and precise, and avoid redundancies and unnecessary phrases such as “a study of”, “an investigation to establish whether”);

ii. State concisely and specifically the aims of the research;

iii. Give a review of the relevant literature;

iv. List the specific problems to be investigated and the specific hypothesis to be tested;

v. State the design of the study and the procedures to be adopted for collecting data;

vi. Ensure that the proposal complies with the university’s safety and ethics clearance procedures where the study involves humans or animals or biohazardous substances or genetically modified organisms;

vii. Describe the materials, tests or apparatus that will be used;

viii. Describe the methods that will be used to assess, analyse and process data;

ix. Set out a work plan, with dates and budget if necessary; and

x. Give a brief outline of the proposed thesis/dissertation/research report to give a clear indication of the way in which the material will be arranged.

A copy of the proposal, approved and signed by the candidate, the Supervisor/s and the Head of the School /Postgraduate Coordinator, must be lodged in the Faculty Office.

If a candidate has not submitted a research proposal within the following periods, the registration shall be blocked, unless the GSC is satisfied that exceptional circumstances exist:

i. Full-time masters (dissertation) – four months

ii. Part-time (dissertation) – eight months

iii. Full-time doctorate – six months

iv. Part-time doctorate – twelve months

10. ETHICS

10.1 Clearance of research being conducted on human participants or animals or biohazardous substances or genetically modified organisms

If a research candidate wishes to carry out research of any kind on human or animal subjects or biohazardous substances or genetically modified organisms the University has to scrutinise proposals on ethical and/or biosafety grounds, and various procedures must be complied with, depending on the type of research:

10.2 Animal experimentation

i. All experiments performed on non-human vertebrates, vertebrate foetuses, vertebrate embryos and cephalopods by staff or candidates are to be scrutinised by the Animal Research Ethics Committee (AREC, a sub-committee of the University Research Committee) prior to the commencement of such studies, irrespective of the origin or ownership of the animals, or source of funding.
ii. If the Animal Research Ethics Committee approves the experiment, it may prescribe restrictions or conditions under which the activity may be conducted, define substantial changes in the research plans, and/or request reports on the progress of the experiment.

iii. The Director or Veterinary Director of the Central Animal Service (CAS) is required to submit a written report on any irregularities relating to the use of animals in approved studies, which are brought to her/his notice. Such reports will be investigated by the Animal Research Ethics Committee.

iv. The regulations apply to all staff members (academic, non-academic and honorary) and to all candidates (undergraduate and postgraduate), irrespective of where the experiment is carried out, and with whom it is conducted.

v. The Faculty Board, Faculty GSC panel, or Chairperson of the GSC, when scrutinising a research proposal, is required to draw the attention of a candidate to the need for clearance to be sought by the candidate from the Animal Research Ethics Committee, through the office of the Deputy Registrar (Academic and Research), and for a Protocol Number to be obtained by the candidate before commencement of research. Such a number must appear on any publication resulting from the research.

vi. Very strict controls and procedures must be complied with throughout the period of research. (As prescribed by the National Code, the Veterinary Director of CAS has ultimate responsibility for the clinical care of animals, and can withdraw any animal from an experiment at any time for clinical reasons.)

vii. The candidate must submit to the Faculty Registrar a clearance certificate/number from the University Research Office before commencing her/his research.

10.3 Research on human subjects

There are two sub-committees of the University Research Committee: a Medical Human Research Ethics Committee (HREC), and a Humanities HREC:

a) The HREC (Medical) has been constituted to monitor the ethics of research to be carried out on human subjects, primarily in the Faculty of Health Sciences whether or not physically invasive techniques are used.

The HREC (Medical) is charged with ensuring that all research in which human subjects are involved (excluding that in (b) below) carried out in the University, by undergraduates, postgraduates, staff or affiliated staff, in the name of the University, using University resources or University property, is ethical and, in particular, safe, soundly based, respects the rights of individuals, and includes informed consent.

The research proposals that require screening include all therapeutic and diagnostic research on patients, as well as research on healthy subjects/participants, whether through physical research, questionnaires or examination of records.

Therapeutic research involving drug trials must first be cleared by the Pharmaceutical and Therapeutic Committee of the relevant hospital.

If the Chairperson of the HREC (Medical) feels that the Committee is not the appropriate one, she or he will refer the proposal to the HREC (Humanities).

The Head of School, Supervisor and/or Chairperson of the Faculty GSC, when scrutinising a research proposal, is required to draw the attention of a candidate to the need for clearance to be sought by the candidate from the HREC (Medical), through the office of the University Research Office, and for a clearance certificate and Protocol Number to be obtained by the candidate before commencement of research. This number must appear on any publication resulting from the research. It is the responsibility of the Faculty Registrar to obtain the clearance certificate number issued by the relevant HREC from the student before commencement of the research.

The Committee may delegate to the Chairperson the power to act in urgent cases.

b) The HREC (Humanities) has been constituted to monitor the ethics of research protocols primarily in the Humanities and Social Sciences, including the risks and benefits to the informant or subject or participant.

The HREC (Humanities) is required to provide a set of guidelines for Faculties against which the need to refer proposals to the HREC (Humanities) can be assessed.

It is the Committee's responsibility to look at critical factors such as the extent to which research could be socially or psychologically invasive or damaging. (Research involving physically invasive techniques is scrutinised by the
HREC (Medical) as set out in (a) above). The Committee’s role is to ensure that all research in which humans are involved, either as informants or subjects, carried out by undergraduates, postgraduates, staff or affiliated staff in the name of the University, respects the rights of individuals.

The Committee’s procedures should include the scrutinising of any research proposals referred to it. The Committee must also vet any research instrument (e.g. a questionnaire) planned by the researcher and referred to the Committee to preclude the use of questions likely to violate the rights of participants.

The Faculty Board, Faculty GSC, Supervisor, panel or Chairperson of the Faculty GSC, when scrutinising a research proposal, is required, where necessary, to draw the attention of a candidate to the need for clearance to be sought by the candidate from the HREC (Humanities), through the University Research Office, and for a clearance certificate (which includes a Protocol Number) to be obtained by the candidate before commencement of research. The Supervisor is accountable in the first instance for raising issues of concern with regard to ethics with the candidate.

It is the responsibility of the Faculty Registrar to obtain from the candidate a copy of the clearance certificate/number from the HREC (Humanities) prior to the commencement of the research.

If the Chairperson of the HREC (Humanities) feels that the proposal referred to that Committee is more relevant to the HREC (Medical), she or he will refer it to that Committee.

The Committee may delegate responsibility for ethics clearance to a properly constituted sub-committee. The Committee may delegate to the Chairperson the power to act in urgent cases.

10.4 Research with biohazardous substances or genetically modified organisms

Any research using genetically modified organisms or substances must be cleared by the Bio-Safety Review Board prior to its commencement. Where a research project involves the use of biohazardous substances (biohazardous substances are defined at point 3 in the document entitled “General Information”, which may be found at the first bullet at the foot of this page: http://www.wits.ac.za/academic/researchsupport/25279/). This is also the place to go to learn more generally about the IBC) it will be necessary to apply to the Institutional Biosafety Committee (IBC) for clearance, unless the work is taking place in a laboratory which has already been granted IBC approval, or the project is being carried out in association with a Supervisor who has obtained IBC approval for that specific project, stating in her/his application an intention to involve postgraduate students. Research involving GMO’s needs to comply with the Department of Agriculture and Forestry regulations. All research must comply with the requirements which are available on the University Research Website.

11. SUBMISSION OF THESES/DISSERTATIONS/RESEARCH REPORTS

11.1 Procedure for Submission

The candidate is required to complete a form informing the Faculty of the intention to submit her/his research. This form needs to be completed three months prior to the submission of the research. Forms can be downloaded from the Faculty website or be obtained from the Supervisor. The completed thesis/dissertation/research report must be submitted to the Faculty Office together with a submission form signed by the candidate and an acquiescence form signed by the Supervisor.

11.2 Requirements for Submission of Thesis/Dissertation/Research Report for Examination

A candidate is required to submit a Submission of Doctor of Philosophy/ Master of Science form, an Acquiescence form and a CD containing a PDF version of the thesis/ dissertation/ research report.

The candidate is required to check with the Supervisor and/or the Faculty Office the required number of bound copies to be submitted for examination prior to submission.

Forms are available from the Faculty website.

The bound copies or the PDF are sent to the Examiners; it is the candidate’s responsibility to ensure that the bound copies and the PDF are complete, readable and identical.

11.3 Submission of a Supervisor’s report

(Updated in 2017 and approved by the Science Faculty Board on 11 October 2017)
A Supervisor’s report is submitted with the candidate’s submission of the thesis/dissertation/research report. The report will only be seen by the GSC for quality assurance purposes and will also form part of documentation if an ad hoc committee meeting is called. The report should be short and should comment on the supervision process as well as briefly assess the quality of the thesis/dissertation/research report. The Supervisor’s report will NOT be sent to the Examiners.

11.4 Submission of a Thesis/Dissertation/Research Report against the Advice of a Supervisor

In terms of the Senate standing orders, candidates are entitled to submit their thesis/dissertation/research report for examination against the advice of their Supervisor/s.

The Faculty’s policy in such cases is that the Supervisor should submit the Supervisor’s report to the Chairperson of the GSC giving the reasons for advising the candidate against the submission of the thesis/dissertation/research report. The Head of the School/Postgraduate Coordinator should be asked to nominate Examiners. No internal Examiner is nominated. If necessary, the GSC shall appoint an ad hoc committee to consider the appointment of Examiners.

11.5 Submission of a PhD Thesis

The Faculty requires submission for publication of a paper to a peer-reviewed journal prior to the submission of the PhD thesis for examination. If there is a compelling reason for waiving this requirement, the Supervisor would have to motivate, and the Heads of School will use their discretion in the matter.

The Senate Standing Orders (and Policies) for Higher Degrees defines a PhD thesis as an extended piece of writing based on research that makes an original and significant contribution to knowledge, that may incorporate creative work or publications integral to the overall argument and is submitted in fulfilment of the requirements of the Doctor of Philosophy qualification. This definition is in the current Rules and Syllabus booklets.

11.6 Structure of the Thesis

The definition of a thesis requires that a PhD thesis that includes publications must be an extended piece of writing that presents a coherent argument or set of arguments. The publications must be integrated into the thesis to maintain its overall coherence.

The content of a PhD thesis should include:

i. A clear statement of the research hypothesis, question or problem;
ii. A rationale for the research which clearly shows how the research makes an original contribution to knowledge;
iii. A framework for how the various chapters of the thesis contribute to the overall integrated argument of the thesis;
iv. A critical review of the literature that locates the proposed research in relation to relevant published work.
v. A clear account of the research design where appropriate;
vi. The necessary ethics clearance where needed;
vh. Data analysis and interpretation where appropriate;
viii. Discussion or conclusion that synthesizes the preceding chapters and provides an argument for how together they have made an original contribution to existing knowledge in the field;
ix. A consolidated reference list of all material referred to in the thesis, using one standard referencing style appropriate to the discipline; and
x. Appendices: additional material related to the thesis.

11.7 Publishable Manuscripts

The number of publications that are required in order for a significant contribution to be made to Science should be left to each School to decide in accordance with practices for knowledge production in their different disciplines. This decision should be taken by the candidate together with the Supervisor, the Head of School/Postgraduate Coordinator using the processes for postgraduate administration in that School. It is recommended that all publications that will be included in the thesis should have been accepted for publication in either ISI or DHET accredited journals. Authorship (including co-authorship and order of authors) of publications should be discipline-specific and agreed upon by all parties.

11.8 Declaration of Unaided Work

This should include reference to sections where other contributions (authors and editors) are declared.
In the case of multiple authorships, a detailed account of the contribution of each author in each multi-authored paper must be provided.

11.9 Examination

Publication in peer reviewed journals will contribute to the standing of the thesis but does not replace the assessment of the Examiners. The examiners' assessment of the thesis will continue to be governed by the University’s guidelines to Examiners.

12. EXAMINATION OF THESESES/DISSERTATIONS/RESEARCH REPORTS

12.1 Nomination of Examiners

Save in exceptional circumstances, the Head of School (in consultation with the Supervisor) shall nominate, for the approval of the Faculty GSC, at least one internal Examiner and at least two external Examiners (of whom at least one should, if feasible, be a person who would normally be working outside South Africa) for a thesis for the degree of Doctor of Philosophy, and at least one internal Examiner and one external Examiner for a dissertation/research report for a degree of Master of Science. In the event of there being no suitable internal Examiner an additional external Examiner must be nominated.

For the degree of Master of Science by dissertation, Master of Science by a combination of coursework and research report and the degree of Doctor of Philosophy, the internal Examiner of a thesis shall normally be a member of staff of the University and may NOT be the Supervisor of the candidate. Where a suitable internal Examiner cannot be identified within the University, an additional external Examiner shall be appointed.

In nominating Examiners, the Head of School (in consultation with the Supervisor) must submit the name, address, present post and CVs of each Examiner, together with a brief statement concerning the suitability for appointment as Examiners (information provided should include: disciplinary area, postgraduate supervision and a list of recent publications). In exceptional circumstances, Examiners may hold a degree of a lower status than the one being examined; however, their role as Examiners must be motivated in advance.

For the purposes of these Standing Orders, an external Examiner is defined as a person who has not in any way been involved in the preparation of the work, and who is preferably not a member of the University staff. If the external Examiner is a member of the University staff, this must be motivated and approved by the Faculty GSC.

The Head of School, Postgraduate Coordinator of the School or Supervisor should approach Examiners informally before nominating them officially for consideration by the Faculty GSC. Possible Examiners should be informed that the expected turn-around time is six weeks from the day they receive the research report, dissertation or thesis. Examiners should be asked if they are willing to examine the dissertation or thesis in a PDF format.

Internal and external Examiners should not be nominated if they have been supervised, worked with or published with the Supervisor within the last 5 years and they must not have supervised that person in the last ten years. A short motivation should be given as to why the Examiners are appropriate.

12.2 Panel of external Examiners

In certain instances MSc CWRR programmes may opt to use a panel of external Examiners. The following procedures should be followed:

i. An internal Examiner (not the supervisor) is responsible for marking the research report and will prepare a written report on the research report and allocate a mark. The marked research report together with the internal Examiner’s report will be examined by an external Examiner. The report by the internal Examiner will be ratified by the external Examiner.

ii. Supervisors will continue to nominate an internal Examiner in consultation with the Head of School.

iii. The Head of School would approach the external examiner in the normal way and request acceptance of the task. The external Examiner will review batches of research reports. (This may delay the graduation process.)

iv. The final agreed mark for the research report is uploaded on the system in the normal manner.

12.3 Confidentiality of names of Examiners (both external and internal)

The names of the Examiners should be confidential during the examination process but should be revealed to the candidates when the candidate is qualified. Examiners should be advised of this at the point at which they are approached to examine the research.

12.4 Consultation on the examination process

(Updated in 2017 and approved by the Science Faculty Board on 11 October 2017)
Examiners shall not consult one another except by permission of the Dean and Chairperson of the Faculty GSC, usually in response to a request for further information, until the examination process is completed. The Head of School and Chairperson, if they consider that the circumstances are exceptional, may give permission for Examiners to confer with one another in writing, provided copies of the correspondence are made available to the Chairperson of the Faculty GSC.

Examiners, Supervisors and the candidate may NOT consult during the examination process.

12.5 Examiners’ Reports: Availability to Supervisors

The Examiners shall send their reports to the Faculty Registrar only. The reports are scrutinised by the Chairperson of the GSC who prepares a recommendation. The recommendation, together with the reports, is then circulated to the GSC for consideration and approval. Thereafter, the reports are made available to the appropriate School GSC representative who then passes the material onto the Supervisor. The Supervisor is then responsible for contacting the candidates and implementing the recommendation of the GSC. Examination reports may not be released to the Supervisor or the candidate until the Faculty GSC has finalised the recommendations based on an assessment of all the reports.

12.6 Unfavourable Examiners’ Reports

In terms of the Senate Standing orders, an ad hoc committee meeting will be held if a candidate receives any unfavourable Examiners’ reports.

12.7 Disclosure of names of Examiners to candidates

In terms of the Senate Standing orders, the names of Examiners are confidential, but should be disclosed to successful candidates if the Examiners consent to this after the examination process.

12.8 Awarding a MSc by Coursework and Research Report

For the award of the degree a candidate must pass both the Coursework and Research Report components with a minimum of 50%.

12.9 Master of Science with distinction

MSc by Dissertation

The degree of MSc shall be awarded with distinction only when the Examiners are unanimous in their recommendations. If only the external Examiner has recommended the awarded of the degree with distinction then the GSC may consult the internal Examiner on this issue.

MSc by Coursework and Research Report

For the award of the degree a candidate must pass both the coursework and research report components with a minimum of 75%.

13. AD HOC COMMITTEE MEETING

If the Examiners are not unanimous in recommending the award of the degree, or if there is a 15% or more discrepancy in the marks awarded by the Examiners of a Research report, or if a candidate receives an unfavourable Examiner’s report, or if the Chairperson of the Faculty GSC considers that the Examiners’ reports are inconclusive, an ad hoc Committee shall be appointed to consider the reports in the first instance. Refer to Senate Standing Orders on Higher Degrees for further details regarding ad hoc committee meetings. Minutes from these meetings are noted at the GSC.

14. TIME FRAMES FOR CORRECTIONS TO BE COMPLETED

Senate Standing Orders on Higher Degrees

A34 Revision

Candidates are entitled to appropriate supervision while revising theses in response to Examiner’s reports. Revision should be done within a maximum period of six months, unless application for a further extension is supported by the Faculty GSC. Faculties will not require candidates to pay additional fees if revision is completed within three months.
Beyond that, candidates will be required to pay all fees. Failure to submit at the end of the period allowed for revision may result in termination of candidature.
Style Guide for Theses, Dissertations and Research Reports
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BIBLIOGRAPHY
1. INTRODUCTION

This guide is intended for postgraduates who are preparing to submit their thesis, dissertation or research report for examination. The intention is to provide a concise guide covering all aspects of the required document. It does not, however, aim to provide comprehensive information on detailed stylistic features. Additionally, there are usages which are specific to each of the many subject areas falling under the control of the Faculty of Science. Candidates should therefore consult their supervisors about the specific requirements of their topic and discipline.

It should be noted that the terms thesis, dissertation and research report have specific meanings: a ‘thesis’ is the document submitted for the degree of Doctor of Philosophy; a ‘dissertation’ for the degree of Master of Science by research only, and a ‘research report’ for the degree of Master of Science by coursework and research report. The research report should take the form of a ‘mini’ dissertation.

The word ‘thesis’ is used in this document for simplicity, but the information given applies to theses, dissertations and research reports.

2 THE STRUCTURE AND FORM OF THESE, DISSERTATIONS AND RESEARCH REPORTS

This chapter aims to provide information on all matters relating to form and structure in thesis writing; however it is not intended to be an exhaustive resource.

2.1 The structure and form of theses - preliminaries

The essential elements of the Theses are presented below in the order in which they should normally appear.

Title and Title page
Candidate’s Declaration (Signed)
Abstract
Dedication
Acknowledgements
Contents
List of Figures
List of Tables
List of Symbols
Nomenclature
Introductory Chapter
Central Chapters
Concluding Chapter
References
Bibliography
Appendices

2.1.1 Title and title page

A specimen title page is shown in Appendix A. The following information is given on the title page.

**Title:**
The title should indicate the contents and scope of the thesis in as few words as possible. Phrases like ‘a report on investigations into…’ and ‘observations on some aspects of’ add nothing significant to the title and should be avoided. While the title should be as brief as possible it should be accurate, descriptive and comprehensive, clearly indicating the subject of the investigation. It is most important in the view of the Higher Degrees Committee that theses’ titles are fully relevant to the contents of the work to avoid misunderstandings at the time of examination.

The title is best typed in capitals, with a space between each letter and three spaces between words.

**Author’s Name:**
The full forenames followed by surname are usually given under the title. They should be typed with the first letter of each name in capital letters and the remainder in lower case.

**Thesis Statement:**
The following are examples of appropriate wording.
Degree of Doctor of Philosophy:

‘A thesis submitted to the Faculty of Science, University of the Witwatersrand, Johannesburg, in fulfilment of the requirements for the degree of Doctor of Philosophy.’

Degree of Master of Science by research only:

‘A dissertation submitted to the Faculty of Science, University of the Witwatersrand, Johannesburg, in fulfilment of the requirements for the degree of Master of Science.’

Degree of Master of Science by coursework and research:

‘A research report submitted to the Faculty of Science, University of the Witwatersrand, Johannesburg, in partial fulfilment of the requirements for the degree of Master of Science.’

Year when the thesis was completed:
This lowest line should be no more than 25mm from the foot of the page, and should include the place and date of completion of the thesis, i.e. signed on 28 April 2010 in Johannesburg.

2.1.2 Candidate’s declaration
University regulation G.28 specifies the following:

‘A candidate shall submit a formal declaration stating whether the thesis is his/her own unaided work, or if assisted, what assistance she/he has received.’

An example of the conventional form of declaration is as follows:

DECLARATION

I declare that this thesis* is my own, unaided work. It is being submitted for the Degree of Doctor of Philosophy** at the University of the Witwatersrand, Johannesburg. It has not been submitted before for any degree or examination at any other University.

______________________________________________________________

(Signature of candidate)

_________________________________________ day of ______________________ 20________ at __________

* dissertation or research report as applicable

** or Master of Science as applicable.

This declaration should appear on a separate page and each copy of the thesis should be individually signed by the candidate.

2.1.3 Abstract
The abstract is a brief informative summary of not more than 150 words for a master’s dissertation or research report and not more than 350 words for a doctoral thesis. It outlines the purpose of the thesis, the research methods and procedure employed, as well as the major results and conclusions. The abstract should always start with a topical sentence that is a central statement of the major theme of the thesis.

The abstract is extremely important. It should give as concisely as possible the significant facts, especially anything new, the main conclusions and any recommendations. An abstract should be written in normal and not telegraphic style. (See section 8.2 on the University’s requirements for abstracts.)

2.1.4 Dedication
This is a brief, optional statement paying tribute to the writer’s spouse, family, or other associated person. It is typed centrally on a separate page starting on the chapter line and does not require a heading, e.g.
In memory of my mother

Ruby Johnson

1896 – 1975

2.1.5 Acknowledgements
Assistance received in carrying out the work in preparing a thesis should be acknowledged, although it is not usual to acknowledge routine checking, minor assistance or general advice. It is, however, usual to acknowledge financial assistance, permission to publish, as well as special facilities provided by a company, university or research institution.

2.1.6 Contents
The contents should be given on a separate sheet and follow the plan of the structure of the thesis (Section 2.1 above) and the headings in the thesis itself. The contents should only contain the first three levels of headings in the thesis. It must also include the relevant page numbers. (A specimen contents page is shown in Appendix B.)

2.1.7 List of figures
A list of figures follows the contents on a new page, and precedes a list of tables. (A specimen list of figures is shown in Appendix C.)

2.1.8 List of tables
A list of tables follows the list of figures on a new page. (A specimen list of tables is shown in Appendix D.)

2.1.9 List of symbols
Each thesis should provide a list detailing the symbols for physical quantities used. These symbols vary from discipline to discipline and candidates should consult their supervisors with regard to the correct symbols for their field of research.

2.1.10 Nomenclature
Authors should avoid jargon and abbreviations which are not in common use in the field or which have not been defined. If there are acronyms or unusual technical terms, these should be defined in alphabetical order in a table or listed. If there are only a few they may be defined when they first occur in the text.

2.2 Body of the thesis
In most theses the chapters may readily be divided into three categories: the introductory chapter or chapters; the central chapters comprising the major report of the study, divided into logical chapter divisions (publishable/published manuscripts); and the concluding chapter or chapters, which should contain the findings, conclusions and recommendations of the report.

2.2.1 Introductory chapter(s)
The first chapter, or chapters, should contain the following items:

- A clear and complete statement of the problem investigated, the hypotheses tested or the purpose of the study
- A validation or justification of the problem, which eloquently establishes the importance of the problem through substantiated arguments. It is often appropriate, at this point to indicate the limitations of the undertaking and to define words unique to the study or used in a restricted or unusual manner in reporting the investigation.
- A preview of the organisation of the thesis. This will make it easy for the reader to see at a glance the relationship between the various parts of the work.
- A résumé of the history and present status of the problem by means of a literature survey comprising a brief critical review of previous investigations of this and closely related problems. The contribution of these to the question as a whole should be made clear, together with the fact that the investigation arises from fallacies, inadequacies or inaccuracies of earlier studies.
- A statement of the sources of data, the method of procedure (experimental techniques) and the treatment of the findings. In a classic thesis of an experimental nature, a separate chapter (Materials and Methods) is ordinarily devoted to these topics.
2.2.2 Central chapters
It is impossible to give specific directions for organising the findings of all studies, because of the wide variety of topics investigated, techniques employed, and kinds of data accumulated. Suffice it to say that the chapters of this portion of the thesis are the thesis – they are the candidate’s contribution to knowledge. All other portions of the thesis are subordinate to what actually has been discovered and is being made known in the thesis. The candidate should, therefore, take great pains to present their material in a clear and orderly fashion, in terms that will be readily understood.

The organisation and distribution of content should be such that each chapter represents an important division of the subject investigated and reported. Each chapter, other than the introductory and final chapters, can be considered as standalone scientific manuscripts. As such they comprise:

- A contextualised introduction which also provides a statement of the portion of the overall problem;
- A description of the materials and methods used in connection with this part of the overall investigation;
- A description of the collected data;
- A discussion contextualising the information with the published literature; and
- A concluding section/summary indicating the contribution of the findings.

Thus in many cases the central chapters represent a series of publications. Indeed this format is often referred to as a 'Thesis by Publication' (see 2.2.5).

NB For PhD candidates at least one publication must be submitted to a peer-reviewed journal prior to submission of the thesis for examination.

2.2.3 Concluding chapter(s)
The concluding chapter, or chapters, should be a summary, restating the developments of the previous chapters and showing succinctly the more important findings and conclusions of the whole study. It is here that the author is showing how their findings fit into what is known about the topic and how they are advancing understanding of the topic. Obviously the summary sections/conclusions of each of the central chapters/publications form the basis of this concluding chapter. The author may also list unanswered questions that can be the basis of future studies. It is not unusual that synthesis of the introductory chapter and concluding chapter result in a review (or mini review) manuscript for publication.

2.2.4 Appendices
Appendices are convenient places for recording complicated mathematical or other formulae, descriptions of experiments or apparatus, and any other specialised or lengthy material such as computer programme listings, copies of spectra or other instrumental outputs that would otherwise detract from the readability of the text. The reader should be able to study or refer to these later, only if they wish to do so, after they have read the main work. Appendices must be numbered or lettered consecutively in large print at the top right-hand corner of the page to facilitate their location in the text. Each appendix must start on a new page. The appendices should be placed immediately before the list of references.

2.2.5 Variations in thesis structure
As previously mentioned a PhD thesis may be submitted for examination in ‘classic’ format or via ‘publication’. It is important to realise that there is acceptable variation between these two styles. For example a PhD may be submitted for examination with one or two papers already published and a few other chapters that will form the basis for future publications (i.e. after/during examination). Other than the Faculty’s basic rule that at least one manuscript has been submitted for peer review before examination these variations in the PhD structure are acceptable and can be submitted for examination. The ultimate number of publications that emanate from a PhD will vary depending on the subject matter and the broader area of study. Students are encouraged to discuss the research outputs from the degree with their supervisor(s) from the start of their registration.

If a thesis which includes publications is to be submitted for examination there are a few points that should be taken into consideration whilst preparing the thesis:
- Any PhD must make (through research work) an original (novel) and significant contribution to knowledge in the chosen field. Thus the thesis should contextualise the research in an overarching introduction, critically set the collected data in the context of existing literature and should evaluate the contribution that the research makes to the advancement of the research area. A thesis which involves a series of publications must clearly do the same.
- However, this demands taking to account the fact that each published paper has its own introduction, methodology, results and discussion sections.

It is therefore highly likely that there will be repetition of information in a thesis that includes publications. It is important to try to keep this to a minimum. This could be achieved for instance by reducing information in the contextualising introduction and presenting it in the introduction of the paper/chapter.
The writing of the concluding chapter for the thesis is made easier by the fact that each published paper has a conclusion. However, whilst drawing the publications/chapters together and critically appraising them in the coherent and synthesising concluding section of the thesis it is important to remember to demonstrate how all of the research is advancing understanding in the field of study.

In the case of multi-authored papers it is essential that the role played by each author is highlighted in an unambiguous statement. This statement can be placed at the start or end of the chapter/publication in the thesis and should include the details of the publication viz. title, journal name, page numbers, impact factor and must also allocate a percentage involvement of each author and describe their actual contribution. For example:


Tshabalala – 60% (conducted the research, wrote the manuscript);
Simatale 15% (assisted with statistical analyses and their interpretation);
Radebe 25% (supervisor, original idea, funded the research and reviewed the manuscript).

Advisably the statement should be certified by all authors concerned.

Alternatively early on in the thesis (e.g. after the abstract) an additional section entitled ‘structure and outputs of the thesis’ can be included in the thesis. This section should explain the structure of the thesis and can list the research outputs for each chapter (conference presentations and publications) and also provide the details of the involvement of each of the authors (as above).

In any thesis it is essential to establish and retain coherence to the information (story) that is being presented. When a series of published papers are being linked into a thesis the coherence becomes particularly important. For instance the conclusion of one published paper may not directly link to the introduction of the following paper in the thesis. In such a case it would be necessary (and is therefore acceptable) to insert a written discussion leading the reader to the next set of information (paper/chapter).

Different journals have different formatting for the manuscripts therefore the different papers within the thesis may have different formats. This is not a problem. However, changing all of the chapters/papers to the same format can add to the overall style and appearance of the thesis. On the other hand, presenting the thesis with the different formats can emphasise the fact that the work is already published. It is therefore recommended that this point be discussed with the supervisor.

2.3 References and bibliography
References should be chosen and cited to:
- Indicate the source of the writer’s statements;
- Acknowledge another person’s work; and
- Provide a source of additional information.

The relevance of any reference should be carefully considered and the number of references kept to a necessary minimum. All references appear together at the end of the publication. The citations must be given in sufficient detail for easy retrieval of the information.

2.3.1 Referencing systems
There are a number of different referencing systems. The two most commonly used in scientific literature are the Harvard system and the Numerical system. Candidates should consult their supervisors on this matter. You should note that styles for citations vary tremendously from discipline to discipline, and that not all the points mentioned (e.g. title of paper, or inclusive pagination) may be necessary.

Harvard systems
The references are referred to in the text by the author’s surname followed by the year of publication (in parentheses) and are listed in alphabetical order by year of publication in the list of references. If the same author is cited more than once for a given year the letters a,b,c are used to distinguish the articles. If their citation is only to a particular page then this is shown by the use of a colon followed by page numbers (after the date).

If there are more than three authors, only the first (senior) author’s name is given in the text followed by ‘et al.’ Note the recommended layout of the reference list.

Specimen text
A succinct account of the basics of interactive television programming has recently been given (Bolton, 1981). Nyhan and Johnson (1980: 399) have summarised the economic implications. Robertson (1979) has reviewed some of the technical aspects. Veith (1981a, 1981b) has provided the best all-round accounts of teletext and videotext.

REFERENCES


The style used in the abovementioned citations is based on ISO 690, International Organization for Standardization (1984).

Numerical system

The references are numbered in ascending order in the text, and are listed in that order in the list of references. In the text itself, the numerals are typed slightly above the list of the text.

Specimen text


REFERENCES


The style used in the abovementioned citations is based on ISO 690, International Organization for Standardization (1984).

2.3.2 Citations

The order in which items in the references are listed is as follows:

- Authors’ names
- Titles of article, book, report, theses or dissertation
- Edition numbers of book or report number of report
- Location of publisher (in the case of a book)
- Name of journal, publisher, conference, sponsor or report or the word Transactions or Proceedings followed by name of report
- Location of journal, conference, sponsor or society if not well known
- Volume number, issue number, month (abbreviated) and year of journal article or report. Year of book, Theses or dissertation
- Inclusive page numbers of journal articles.
2.3.3 Punctuation guidelines

• Comma is inserted after author’s surname, but full stops are inserted after author’s initial(s)
• Names of journals are written in full unless the abbreviation is accepted practice in the relevant discipline
• Titles of books, reports, Theses, specifications and journals are capitalized; those of articles submitted to journals and conference transactions and proceedings have the first word only capitalized
• Titles of books and journals are either typed in italics, typed in bold print or underlined

2.3.4 Examples of citation for different types of publication

Journal article:

Book:

Transactions or Proceedings:

Theses or Dissertation:
Patton, F.D. Multiple Modes of Shear Failure in Rock and Related Materials, PhD Theses, University of Illinois, Urbana, Ill, 1966.

Conference reference:

Discussions or Closures:

Specification or Code of Practice:

2.3.5 Bibliography

Any supplementary literature not referred to in the text, but considered to be relevant and of interest, may be put after the references in a Bibliography.

3 HEADINGS AND NUMBERING

The arrangement of headings of various levels (hierarchical positions) reflects the organization of the contents of the thesis.

The levels of headings may be indicated by typeface and format alone. For example, the heading ‘TWO-PHASE FLOW’ is recognizably of higher level than ‘Onset of flow instability’.

The numbering of such headings further clarifies the importance, sequence and interrelation of the portions of text under each heading. Thus, the headings ‘2 TWO-PHASE FLOW’ AND ‘2.3.3 Onset of flow instability’ are more informative than those in the example above.

Numbering also facilitates cross-referencing within the text: compare the economy of ‘...see 2.3.3 ...’ with ‘... see Onset of flow instability in the TWO-PHASE FLOW...’.

3.1 Rules for numbering

The recommendations given below are compatible with the International Standard ISO 2145 (1978).

• First level headings (usually chapter headings) of a thesis are numbered continuously beginning with ‘1’
• Each main division of text (chapter) may be divided into any reasonable number of subdivisions, having second level headings which are also continuously numbered. This method of division and numbering can, in principle, be continued to any level, but tends to become clumsy and confusing at the fourth level and beyond

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• Numbering should thus be confined to the first three levels. Further (unnumbered) levels of headings may be identified by typeface and format (see 3.2).
• The numbers designating headings of different levels are separated by full stops (the present document serves as an example). No full stop appears after the last number; if only one number (that of a first level heading) is present (thus, ‘2 TWO-PHASE FLOW’ and not ‘2. TWO-PHASE FLOW’).

3.2 **Typeface and format**
The typeface and format of all headings should reflect their levels, independently of numbering. The typographical details of the system of headings will be dictated largely by the printing system that is used in final production of the thesis. Whatever the typography, it is essential that the system be logical and that it be applied consistently.

Modern practice favours left-hand-justified, rather than centred headings. Note also, that no full stop appears at the end of a heading.

3.3 **Examples of systems of headings**
1 FIRST LEVEL HEADING (Bold) or CHAPTER 1 (Bold)
1.1 Second Level Heading (Bold)
1.1.1 Third level heading (Bold)

Fourth level heading (Bold and/ or Italics)
Fifth level heading (Bold and/ or Italics). This leads into the text on the same line.

4 **STYLE AND PUNCTUATION**
Style implies choice. However, in technical writing there are also constraints which limit choice. The following are some points which must be considered in thesis writing.

4.1 **Text structure**
A good thesis should be comprehensive and precise. The author should take care to presentation their arguments concisely. The author should proof read their draft carefully and critically being mindful to eliminate unnecessary material. Should the author have trouble in presenting their thesis in English, they should seek help in this draft reading process.

The following are some of the techniques that will help:
• Break down complex statements into lists;
• Use the active voice where appropriate;
• Do not use pompous words or jargon where simpler words are as effective;
• Avoid empty phrases such as ‘it is interesting to note that…’; and
• Avoid unnecessary words, e.g. ‘the precipitate was found to be in a wet condition’ which means simply that ‘the precipitate was wet’.

4.1.1 **Word choice**
**Use of the personal pronoun**
The argument against using personal pronouns in theses is that the subject matter is the important thing and the author is not. However, should this lead to vagueness in phases like ‘it is considered’ or to ponderous writing like ‘the author is of the opinion’, then it is better to use a personal pronoun, e.g. ‘I consider’ or ‘I think’.

**Technical language and jargon**
Technical language is a necessary part of scientific writing. The writers must, however, be certain that their audience will understand the language they use. Where there is doubt, they should define their terms, either in the text or in a glossary.

For example, ‘The hydrostatic loss appears to be responsible for dumping (or weeping) from sieve places…’ is acceptable in a thesis intended for readers familiar with distillation terms and concepts, but the statement becomes mere jargon where the potential readers may not be experts in the field.

Ordinary English may be misused by using intransitive verbs. One cannot react alcohol with acetic acid or state that alcohol was reacted with acetic acid. These statements are grammatically incorrect.
Jargon is often created by introducing strange and unnecessary new words. For example, colonise, oxidise and analyse are acceptable through general usage, blendorise, insolubilized and solubilization are not: however frequently they may be used in a chemical laboratory.

4.1.2 Tenses
A guide like this cannot cover the ramifications of the uses of tenses in thesis writing. The following points may help, however, to avoid the more common errors:

- Reports of work done are usually written in the past tense;
- Universal truths, such as natural laws, are generally stated in the present tense;
- Do not change tenses in a sentence unless there is good reason for it. For example, if we say, 'the balloon rose because the hydrogen inside it was lighter than air', we may mean that this might apply only under the observed conditions; or we may mean that the gas used is inherently lighter than air. To make the meaning clear we must mix tenses within the sentence, e.g. 'the balloon rose because hydrogen is less dense than air'. But complications arise when tenses are changed without the writer having had a specific intention in mind.

4.1.3 Sentence structure
Active and passive voice
Traditionally technical writers have regarded the passive voice as the only acceptable form of presentation. In modern writing, however, the active voice is used far more often. Phrases like 'Economy justifies the procedure', are preferred to 'the procedure may be justified in the interest of economy'.

Sentence length
Long sentences with a number of dependent clauses are difficult to follow, particularly if the subject itself is complex. Reading tests have shown that sentences with more than 25 words are generally difficult to comprehend.

4.1.4 Paragraphing
Paragraphs are there to help the reader. They do so by breaking up the text into manageable sections. This objective is often not achieved because of poor paragraph construction. The following guidelines will assist in organising paragraphs:

- A paragraph should consist of a central statement supported by a group of details;
- In technical writing the main statement is usually at or near the beginning. For argument or persuasion, however, the central statement is often placed at the end as a climax to the supporting details;
- The transition between paragraphs should be smooth, with some form of connecting link in the text; and
- Long unbroken sections of text are discouraging to the reader and therefore paragraphs should not be unduly long. If your writing has many paragraphs exceeding 100 words, you should examine it critically.

4.2 Conventions
4.2.1 Capitals
There is much confusion about the use of capitals and authorities differ considerably. The modern trend is to use capitals sparingly. The following are some general guidelines:

i. The first word in a sentence and in a direct quotation are capitalized; proper nouns are capitalized and common nouns such as river and company are also capitalized when they form part of a name e.g. Amazon River; and

ii. Common nouns are capitalized when they are used with a number or letter to designate a specific thing, e.g. Laboratory D.

4.2.2 Acronyms
An acronym is a word formed from the initial letters of a name or by combining initial letters, or parts of a series of words, e.g. ‘radar’: RA(dio) D(etecting) A(nd) R(anging). Certain acronyms like, ‘radar’ have become dictionary words. In general, however, use acronyms sparingly and, when using them for the first time, spell them out. Where the acronym is not an accepted dictionary one it should be in capitals, e.g. NATO.

4.2.3 Spelling
In a language as complex as English there is no simple set of rules. When in doubt (e.g. when to use ‘s’ and when ‘z’) consult the Shorter Oxford English Dictionary (1973) which gives the accepted standard English spelling (preferred to the American) or Oxford Dictionary for Writers and Editors (1981). We highly recommend you use the Oxford English Dictionary (OED) available online at

http://innopac.wits.ac.za/search~S0?/Xenglish+oxford+dictionary&SORT=DZ/Xenglish+oxford+dictionary&SORT=DZ&extended=0&SUBKEY=english%20oxford%20dictionary/1%2C99%2C99%2CB/frameset&FF=Xenglish+oxford+dictionary&SORT=DZ&6%2C6%2C6

(Updated in 2017 and approved by the Science Faculty Board on 11 October 2017)
This dictionary, in addition to guidance on spelling, gives useful information on punctuation.

4.2.4 Abbreviations
Use only generally accepted abbreviations and symbols.

4.2.5 Punctuation
There are some 36 chief marks of punctuation. However, many of these are used only in specialised linguistic contexts and all should be used sparingly. For a concise guide to the use of the more common punctuation marks see Houp and Pearsall (1984).

4.2.6 Pagination
Pagination (page numbering) should run consecutively through the thesis with all pages (including figures, tables, numbered, etc).

5 NON VERBAL MATERIAL
The customary medium of communication is language. However, in the sciences and engineering extra-linguistic material such as numbers, symbols, mathematics, tables, graphs and illustrations of various kinds are frequently used. A cardinal principle for such material is that it should be used only when it is the most effective means of communication and understandable to the target audience.

5.1 Numerals
The rules for the correct use of numbers are simple and are in the main based on common sense. In the text use words rather than numerals below ten. Exceptions to this rule occur in illustrations and tables, or when integers are associated with unit symbols. For numerals above ten, use whatever provides optimal clarity and appearance:
- Where it is necessary to have decimal fractions these should be expressed in numerals, e.g. ‘the original design required 2.7 times as many components as were finally used’. Do not begin a sentence with a numeral. This can lead to confusion and is in any event displeasing to the eye;
- Ordinals from ‘first’ to ‘tenth’ should be written out. For higher ordinals the author should once again use their discretion; and
- Avoid writing out large and small numbers by using either accepted prefixes or exponential notation, e.g. 253 x 10³ or 0.253 x 10⁶. Where large numbers must be written out these should be separated by a small space into groups of three counting from the left or right of the decimal sign, e.g. 5 241,2. For numbers less than unity, a zero should precede the decimal sign, e.g. 0.352. When listing numbers – as in a table – always align them on the decimal sign. In South Africa the decimal comma was initially used instead of the decimal point but common practice is now a point.

5.2 Mathematics
Mathematics included in a text should form an integral part of the argument and should be intelligible to the intended readers.

Mathematics must be carefully presented – using typewritten symbols as far as possible and putting in the remainder neatly in ink. This should no longer be necessary as computer software provides all mathematical and notion needed. The units and symbols used should be consistent and follow international practice as detailed in British Standards Institution (2010) or International Organization for Standardization (2010).

The form of presentation of a mathematical expression should be such that it:
- Brings out clearly the structure of the expression and
- Is as simple as possible to type

To comply with the last two points, algebraic fractions in the text should make use of a solidus and not a horizontal bar. Thus write \(\frac{a}{b}\) and not \(a/b\). However, note that careless use of the solidus can lead to ambiguities. Thus \(\frac{a}{b+c}\) means \(\frac{a}{b+c}\) and not \(\frac{a}{b} + c\). Such ambiguities can generally be overcome by the use of parentheses, as in \(\frac{a}{b+c}\), \(a/(b+c)\) and \(\frac{a}{b+c}\). Be sure that all parentheses and brackets occur in pairs.

Exponential expressions should be set up as \(a^{b+c}\) or \(a^{(b+c)}\) rather than as \(a^b + c\).

(Updated in 2017 and approved by the Science Faculty Board on 11 October 2017)
However, with more complicated expressions the foregoing rules may violate the conditions above. It may then be necessary to simplify the expression or set it out on a line all to itself. For example:

\[
\frac{\hbar (r_2 - r_1)}{2n \pi \hbar k} + \frac{1}{2nk} \ln \left( \frac{r_2}{r_1} \right) + \frac{1}{2mr_2 \hbar}.
\]
can be set out as:

\[ r = \frac{I_0 (\frac{t}{T})^{1/2}}{2 \pi \eta h_2} \]

where,

\[ r = \frac{1}{2 \pi \eta h_1} \left( \frac{1}{2n k} \ln \left( \frac{r}{\eta_1} \right) + \frac{1}{2n \eta h_2} \right) \]

Modern practice favours central justification on all equations, as shown above, rather than vertical alignment of equal signs. Where the right hand side of an equation is too long to fit on one line, a break should be made before an operational sign (e.g. + or -) or at some other logical point, but preferably not within a bracketed statement. The next line, starting with an operational sign, should then be placed just to the right of the equal sign. It may, however, not always be possible to avoid breaking a statement within a bracket. In this case the above rule should be observed as far as possible, as illustrated in the following example:

\[ \phi = \frac{(1/\gamma) \int (\phi_1 \phi_2 \phi_3 dV) + \int (\phi_2 \phi_1 \phi_3 dV) + \int (\phi_3 \phi_1 \phi_2 dV) - \int (\phi_2 \phi_1 \phi_3 dV)}{\int (\phi_1 \phi_2 \phi_3 dV)} \]

where,

\[ \phi = \frac{1}{\int (\phi_1 \phi_2 \phi_3 dV)} \]

Particular care is required in the use of subscripts and superscripts. They should be placed next to the main symbol and half a space below or above it respectively. Where both are used they must line up vertically, i.e., \( \phi_1^2 \) not \( \phi_1^2 \). Thus, \( \phi_1 \) should become \( \phi_1(x) \) and \( \phi_2 \) becomes \( \phi_2(x) \). Periods are generally omitted in abbreviations, e.g. \( \phi_1 \) not \( \phi_1. \)

Standard symbols should be used wherever possible and the recognized literature in the field consulted for references to these.

LaTeX is convenient for preparing mathematical type for theses, dissertations and research reports.

5.3 Tables

Tables are best used when data cannot be clearly presented in graphical form. For example, discrete data sets can frequently be compared more effectively by using a bar chart than a table. In one sense a table is a form of graphical presentation. As such it should be kept simple and clear. Only relevant information of conclusions should be included. There is no need to put in all intermediate steps or results – they only cloud the main issue.

Tables can be arranged either vertically or horizontally. Vertical tables are those which can be read when a page is in the normal position. Clearly they are the most convenient to read. Where possible they should be arranged to fit into a single page of the document. Horizontal tables are used where their size is such that they cannot be fitted into the width of the printed page.

Each table should have a heading and be numbered with Arabic numerals. Tables in theses should be numbered as follows:

- Firstly by the number of the main text division (chapter) in which they occur.
- Secondly, by Arabic numerals running consecutively through that text division.

The two numbers are separated by a full stop. Thus, the first table in Chapter 2 is Table 2.1, the second table in Chapter 2 is Table 2.2 etc. The same principle holds for lettered appendices, but the full stop is omitted. Thus the third table in Appendix E is Table E3. Tables should be referred to in the text by means of the table number.

Tables in papers for journal publication are numbered (without reference to the main text division) consecutively with Arabic numerals throughout the text. The columns in a table should be arranged for easy comparison, related information being brought together. Each column should carry a brief heading and include consistent units where relevant. The same symbols, units, and abbreviations should be used in the text. Table 5.1 illustrates some of these rules.

Table 5.1 Calibration of rotameter

(Updated in 2017 and approved by the Science Faculty Board on 11 October 2017)
<table>
<thead>
<tr>
<th>Position of Float (mm)</th>
<th>Flow rate (m³/h)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>TL = 17°C</td>
</tr>
<tr>
<td>100</td>
<td>0,451</td>
</tr>
<tr>
<td>200</td>
<td>0,736</td>
</tr>
<tr>
<td>300</td>
<td>1,027</td>
</tr>
<tr>
<td>400</td>
<td>1,348</td>
</tr>
<tr>
<td>500</td>
<td>1,656</td>
</tr>
</tbody>
</table>

In column headings avoid using expressions like x10⁻³ as these are ambiguous. It is not clear whether the figures in the column have already been multiplied by 10⁻³. Rather use the recognised metric prefixes, e.g. ‘mm’. Where this is not possible, make sure the heading is unambiguous even if it appears clumsy. For example, use ‘Capital cost:Rm’ rather than ‘x10⁶ = Capital cost in R’.

5.4 Illustrations
All illustrations (graphs, photographs, drawings and diagrams) are referred to as Figures. Each has a number and a descriptive title which should be placed below the illustration. Numbering follows the same principles as those for tables (see 5.3). Thus, the first figure in Chapter 2 is Figure 2.1, the second Figure 2.2 etc. The third figure in Appendix E is Figure E3.

Figures in papers for journal publication are numbered consecutively with Arabic numerals throughout the text.

5.4.1 Graphs
3D-graphs can take on a number of different forms, e.g. bar charts, divided circles, pictographs, or line graphs. The appearance of a graph is its major attribute. It is, therefore, up to the writers in choosing one of these forms, to decide on the impression they wish to convey. As line graphs are most frequently used in scientific and technical work, attention here will be directed primarily to this type. Line graphs are mainly used to show the relationship between a continuously varying independent variable and one or more of its dependent variables. Wherever possible use should be restricted to this purpose. In preparing graphs for inclusion in a thesis the following should be borne in mind:

- The graphs should illustrate clearly the point which the writer wishes to make;
- The scale chosen should be such that only the relevant parts of the curve are presented, that is, the grid should not be extended unnecessarily beyond the limits of the curve to be shown;
- If it is necessary to suppress the zero this should be clearly shown;
- The choice of grid size depends on the accuracy required;
- The scale should be easy to read and be restricted to multiples and submultiples of 10;
- Units should be clearly stated and written so that they can be read easily;
- The caption should be brief but self-explanatory and be positioned underneath the graph; any notes or supporting documents, if necessary should be placed below the title; and
- To ensure clear reproduction graphs should not be overburdened with detail.

Fig 5.1 is an example of a good graph.
Figure 5.1  Effect of carbon dioxide concentration in biogas on power output

Graphs should be drawn on high quality paper. The lines should usually be at least 1mm thick and number or figures should not be too small.

5.4.2  Drawings, diagrams and photographs

Line drawings and diagrams are made up of lines, words and a few special symbols. They must, as far as possible, be simple and uncluttered with detail: working drawings are normally not acceptable. Unless they serve to clarify the verbal content of the report, or express an idea more vividly than words can, drawings or diagrams serve no purpose. Only generally accepted graphic symbols should be used.

The inclusion of photographs may occasionally prove useful and sometimes even necessary. If they are to be used they should be taken with care. Cluttered backgrounds and views of unrelated equipment should be avoided. Adequate contrast should be provided, and care taken so that important details do not fall into shadows or become obscured by the glare of highlights. Some sort of scale should be included so that the size of the object is reflected. Lettering on prints may be necessary, but care should be taken to ensure that the letters stand out.

Any illustrative material which cannot effectively be reduced to A4 format, but which is relevant may be included in a pocket on the inside back cover of the thesis or included as foldouts.

6  PRODUCTION OF THE THESIS

6.1  Type layout

A thesis should be typed. A clear font such as Arial or Times New Roman should be used. Italic script or other unusual type faces should generally be avoided unless they are necessary. A font size 10 or 12 should be used. The font colour must be black.

The main body of the text should be typed in one or one and a half line spacing and generous margins should be allowed. Typed pages should be aligned at a constant distance from the top and bottom of the page, although the top margin of the first page of a chapter may be lowered slightly. (A specimen page layout is shown in Appendix E.)

The following are suggested dimensions of margins:
Top, bottom and right: 30 mm
Left: 40 mm

All work should be justified to the left margin and should not normally be indented. Avoid full justification of text as it reduces the readability of the thesis. Use a double line space to indicate a new paragraph.

A good quality white bond paper of A4 size should be used. First submissions should be printed back to back and bound. Final submissions should be printed on one side only and unbound.
6.2 Illustrations
Illustrations form a very important part of a thesis and should be carefully prepared. Whatever method of reproduction is to be used for their presentation in the thesis, the essential requirements are that a table or illustration should be neat, concise, legible and, above all, comprehensible. Originals of photographs are not necessarily required but it is essential that any reproduction of a photograph, such as a photocopy, is clear.

7 EDITING AND REVISING
7.1 Checking, rectifying and polishing
Editing the first draft is the authors’ responsibility; they cannot expect their supervisors or any outside person to:
- determine the accuracy of the information;
- clarify ambiguities;
- emphasize important issues; and
- check spelling.

The editing process is essentially one of critical evaluation of the manuscript against the requirements set by the objectives of the research. The main requirements are those of content, orientation to the reader and of accuracy, brevity and clarity in the functional writing style. The author should evaluate each chapter of their thesis and check whether it:
- Has real content;
- Is free from inaccuracies, ambiguities and bias;
- Emphasizes important issues and is free from verbosity, irrelevances and unnecessary detail;
- Can be understood readily; and
- Is appropriate to the situation.

Before starting the process of checking, rearranging and polishing, the writers should preferably leave their draft for a few days so that they can mentally switch to the role of a critical reader.

The editing consists of three operations which should be done separately. These are:
- The integrity edit;
- The logical progression edit; and
- The text and language edit.

7.1.1 Integrity edit
The contents page should be examined and the following points checked:
- Are the headings and subheadings clear descriptions of what is covered?
- Do they form a recognizable logical pattern and is the numbering system used a reflection of this pattern?
- Are the headings grammatically parallel?

Next the text should be checked page by page for the following:
- Are the headings and numbers identical to those used in the list of contents?
- Are the tables and figures properly numbered and in sequence, and do they have informative headings and captions?
- Are tables, figures and references correctly cited in the text?

7.1.2 Logical progression edit
Each chapter should be read as rapidly as possible to:
- Check that the objective is clearly stated and that the concluding section shows whether or not the objective was achieved;
- Check that the logical thread is apparent; any jumps or gaps in the progression are usually an indication of faulty organization; mark these, but do not correct at this stage; and
- Check in particular whether sections contain anything which does not belong there.

The conclusions list should arise from the discussion. Structural defects must be corrected before the text and language edit.

7.1.3 Text and language edit
Only when one is satisfied with the basic format of the report should one concentrate on the structure of the text and the use of language. The text may include non-verbal components such as graphs and illustrations. These should be evaluated as part of the text. The criteria for evaluating functional writing, mentioned before are:

Content criteria
• Accuracy – sufficient for the needs of the audience;
• Brevity – leaving out irrelevancies and at the same time covering the essentials adequately;
• Clarity – avoiding vagueness and ambiguity; and
• Emphasis – drawing attention to significant information

**Tonal or attitudinal criteria**
• appropriate to the situation;
• concern for the needs of the audience;
• serious treatment of subject matter; and
• authoritative without being writer-centred.

The specific aspects of language usage discussed in Section 4 should be consulted.

### 7.2 Graphic Material

Essentially the same criteria used in the language edit, viz accuracy, brevity, clarity and emphasis can be applied to graphic communications.

One of the main reasons for using graphics is their ability to give overall view and show relationships. Any graphic material which fails in these important areas probably does not justify the extra effort of using it.

### 7.3 Time and Space Separations

Most theses are prepared for consideration within a short time and often for a local audience. However, once accepted, a thesis becomes part of the body of scientific literature. Writers should therefore draw attention to information that is only valid for a short time. The writer should be aware that points which are valid locally (e.g. under Highveld condition an altitude of about 1500m) are not necessarily valid generally. For instance, a recommendation to install solar heating panels on north facing roofs will not make sense in the northern hemisphere.

Cost data are also subject to variation by place and in time, and the exchange rate and other relevant factors may have to be specified to make matters clear.

### 7.4 The External Viewpoint

Authors may claim to be objective. Usually they are not – at least, not to the extent required for a good manuscript. Therefore the external readers’ viewpoints are needed. This can be provided by supervisors or critical colleagues who do not have to be experts in the subject of the manuscript, but who must be able to place themselves in the position of the intended audience. They should be skilled in recognising the errors authors make and should annotate the manuscript accordingly and, in addition, suggest ways of improvement. The best manuscripts are produced by a co-operative interaction of authors, supervisors and independent editors.

### 7.5 Rewriting

Of all tasks, rewriting a text is the most unpopular, yet if we wish to develop a clear style it is usually essential. Editing tends to concentrate on the correction of errors rather than elegance of diction. Rewriting all or a substantial part of the text is usually the only way of getting an elegant well-balanced text.

### 7.6 Readability of Texts

One of the main objectives of editing is to improve the readability of the text. The factors affecting readability have been extensively studied and various indices have been proposed. Most of these, however, were developed for school textbooks or general reading. Comparatively little work has been done on assessing their relevance to technical writing. For this reason readability measures should be used with caution in evaluating technical writing. This applies particularly where the index is given as a measure of reading age. In spite of this, readability measures have a role in comparing texts and are useful in placing them in a rank order of readability.

One of the simplest to use is the Gunning Fog Index. This measure depends on two factors, sentence length and percentage of ‘difficult’ words. The procedure for calculating the Fog Index is as follows:

1. Select a passage of about 100 words of continuous prose (avoid passages containing lists);
2. Calculate the average number of words per sentence, ie, average sentence length (l);
3. Calculate the percentage (p) of difficult words. This is done by counting the number of words containing three or more syllables and expressing this number as a percentage of the total number of words in the passage. Three-syllable words ending in –ed or –es, words that are normally capitalized and coupled short nouns (eg bookkeeper) are not counted;
4. Calculate the fog index using formula; and
5. Fog index = 0.4 (l + p)
Texts with an index below 10 may be staccato, while those above 16 may be unnecessarily difficult. It must be emphasized that the Fog Index is one of many criteria that can be used to evaluate texts. A skilled worker can produce readable long sentences while a poor writer can make a short sentence difficult to read.

7.7 Computer editing
Editing programmes must be used. These include spelling and grammar checks, calculation of readability indices and the production of an index.

7.8 Outline processor, spelling checker, cross referencing facilities, index and/or contents
Authors of theses are advised that the modern trend is to prepare your thesis yourself – right from the start.

8. LAWS AND REGULATIONS

8.1 Copyright laws
The copyright Act 98 of 1978 which is the act currently in force in South Africa applicable to both published and unpublished sources. Direct quotations from another work are permitted to a reasonable extent for the purposes of research provided that the source and name of the author are acknowledged. Subsequent publication of the thesis as a book necessitates the explicit approval of the copyright holder for this purpose. In this connection, thesis writers should be aware also of University Rules and Regulations in the Faculty of Science Rules and Syllabus Book.

The thesis, dissertation or other work shall:
- Include an abstract of not more that 350 words for a doctoral thesis and not more than 150 words for a master’s dissertation; and
- Conform as far as possible to the style and format recommended in the style guide for theses and dissertations.

Formal Declaration
Together with their thesis, dissertation or other work the candidate shall submit a formal declaration stating whether:

- It is their own unaided work or, if they have been assisted, what assistance they have received;
- The substance or any part of it has been submitted in the past or is being or is to be submitted for an award at any other university; and
- The information used in the thesis, dissertation or research report has been obtained by them while employed by, or working under the aegis of, any person or organisation other than the university.
A SURVEY OF THE GENUS PYRAMIMONAS SCHMARDA (PRASINAPHYCEAE) FROM SOUTHERN AFRICAN INSHORE WATERS

Dhiya Singh

A dissertation submitted to the Faculty of Science, University of the Witwatersrand, in partial fulfilment of the requirements for the degree of Master of Science

Johannesburg, 2017
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First line on full text page

CHAPTER LINE

First line under chapter heading

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Note: This select list of sources consulted in the compilation of the Guide has been arranged according to the Harvard method.


