GUIDELINES FOR RESEARCH PROPOSALS

NOTE:

- These are general guidelines only; faculties may have their own discipline-specific guidelines or templates for research proposals, particularly in the health and applied sciences and engineering.
- Study these Guidelines carefully and incorporate the instructions in the proposal before submission.
- Pay special attention to the Evaluation Checklist. This will help you evaluate your proposal using similar criteria to those used by the faculty research committee and funding agencies.
- Provide a table of contents, including sub-headings and page numbers.
- A dissertation comprises a 50% research project (50% course work).
- A thesis comprises a 100% research project.
- The research proposal should not be too long; five – ten pages generally suffice.
- Your first step is to register a research topic (HDC 1.1) through the faculty research committee.
- Your research proposal (HDC 1.2) must be ratified within six months of registering the topic.

Purpose of the research proposal

To establish that the candidate has:

- a viable and researchable problem
- an acceptable plan of action for undertaking the research
- done sufficient preparation to establish the rationale for the research
- a feasible chance of completing the research

The order of the layout suggested below may be changed and certain sections may be combined; additional points may also be added. The suggested headings serve as road signs to indicate to the evaluator:

- what the research problem is
- how the candidate intends doing the research
- what the outcomes could be

The examination criteria for a doctoral degree are that there should be clear evidence of originality, creative thinking and problem solving. The requirement for a doctoral thesis is that candidates must provide proof of original and creative thinking and problem-solving, and make a real contribution to the solving of a particular problem in the industry to which their research applies (NQF Level 10 – see page 26 of Higher Education Qualifications Framework Draft for Discussion, July 2004.)

For a master’s thesis, candidates must prove that they understand a particular problem in the industry in which they have done their research, are able to analyse and set it out logically, are able to arrive at logical conclusions or a diagnosis, and are then able to make proposals for the improvement/elimination of the problem. (NQF Level 9 – see page 25 of Higher Education Qualifications Framework Draft for Discussion, July 2004.)
1. **Title**

The title should be concise, as long titles are cumbersome to accommodate in information retrieval systems. Select appropriate key words or phrases, and avoid rambling and meaningless statements such as: *An investigation into the possibility of conducting research in ...* Do not start a title with a present participle, such as *Investigating*, or *Analysing*. The title should rather read: *An analysis of ...*

2. **Clarification of basic terms and concepts**

The same words may have different connotations to people, especially if they work in various disciplines. List and clarify or define the main words and concepts that you will use in your research. It may also be useful to provide a list of abbreviations and acronyms with their full names, e.g. SMME. Commonly used abbreviations/acronyms (such as UK, USA) need not be included.

3. **Statement of research problem**

This is the heart of the proposal. Normally a sentence, or at most a paragraph, is all that is required to describe exactly what the problem is. Many candidates have difficulty in describing the problem: instead they list the objectives, outcomes, needs or other irrelevant aspects.

If the research problem is not adequately or precisely described, it is likely to be rejected. The National Research Foundation (NRF) reports that most research proposals are “characterised by poorly formulated problems”. Furthermore, “researchers often indulge in jargon, which seems to obscure rather than explain what the research problem is". Candidates should ensure that the problem and their objectives remain the focus of their thinking and writing.

4. **Background to the research problem**

Since the statement of the problem should be very brief, it is necessary to explain separately what the background to the problem is. Clarify the area of concern, or what needs justify the research (this could be a sub-heading). Any information that helps the evaluator to understand the problem may be included. Indicate why you believe that it is, in fact, a researchable problem. This section could be combined with the literature review, or form a sub-section of it.

5. **Literature review**

An adequate literature review is required in all research proposals, especially if funding is required. The purpose of the literature review should:

- Provide evidence to the faculty research committee that you are well acquainted with past and current research in the field of study.
- Prove that the thesis/dissertation will not duplicate past or current research.
- Indicate how the intended research relates to similar and past research; in other words, the literature review positions your research within the existing body of knowledge.

Some faculties also require candidates to indicate, from their review of the relevant literature, what related aspects require further research.

A recent NRF report relating to the evaluation of research proposals points out that the literature review “must provide a rationale for the choice of problem, or a theoretical framework for the study”, and that too often, this is missing.
In the final thesis/thesis, a much more complete and extensive list of References (all sources cited) or a Bibliography (more comprehensive) will have to be presented than in the initial review.

The NRF report further points out that too often the literature review does not correspond with the aims of the research. A specific comment of NRF evaluators is that many candidates “took the review of literature as a perfunctory task and therefore there was no contribution to or advancement of the intellectual debate”.

References to consult:

- Navtech database (technikon research only) (SA)
- Current and completed research database (NRF) (SA)
- Union catalogue of theses and dissertations of South African universities (SA)
- Dissertation abstracts international (USA). Go to Proquest, and click on Dissertations and Theses.

The above are all available on Sabinet via the CPUT Library webpage – see “databases” link.

It is important that doctoral candidates consult the international database listed above before registering a title.

Candidates wishing to apply for NRF funding should provide evidence of having completed searches of the above databases.

Consult the subject librarian for your faculty and the Library Postgraduate Student Support Centre. They will assist you in searching the various periodical indexes and abstracting and full-text services.

Indicate what key words/indexing terms, databases, vendors and search engines you have used. Databases and search engines should not be cited in your list of references, however.

The CPUT guidelines: Research and the Harvard method of bibliographic citation: a research writing and style guide for postgraduate students should be followed meticulously.

6. Hypotheses or research questions

If you state hypotheses, indicate whether they are statistical or non-statistical hypotheses. If statistical, indicate at what level of statistical significance they will be accepted or rejected. Depending on the nature of your discipline, it may not be necessary to base your research on hypotheses. You may list certain fundamental research questions or underlying assumptions fundamental to your research.

7. Objectives of the research

Clarify the aims and objectives of the research. Where feasible, objectives should be divided into main and subsidiary objectives, and should be numbered. The NRF Research Review Guidelines specifically evaluate whether the objectives are well articulated and whether they are realistic and attainable. In writing the proposal, it is important to remain focused on the objectives.
8. Research design and methodology

This is a cornerstone of the research proposal, and therefore a critically important section. Failure to address it properly can lead to the research proposal’s rejection and even to the rejection of the final thesis/dissertation by an external examiner. While you may not be able to give final details of your methodology at the research proposal stage, it is important to give a sound provisional indication so that the evaluator is satisfied that your methodology is relevant and acceptable.

Clarify your method of investigation, e.g.:

- Questionnaires
- Personal interviews
- Focus groups
- Laboratory experiments
- Mathematical modelling
- Design techniques, etc.

Indicate your sampling methodology, e.g.:

- Size of sample
- Population
- Experimental and control groups
- Prevention of bias, etc.

Indicate statistical methods and substantiate why you intend using the proposed specific statistical methods.

Indicate whether ethics approval is required, and apply for ethics clearance through the faculty ethics committee.

The NRF report notes that in many of the research proposals evaluated “the research methodology is poorly articulated”. The NRF points out that at times “there was no correspondence between the stated aims of the research and the chosen methodology. Often the description of the methodology was restricted to the mere statement that qualitative or quantitative research methods were to be utilised. Instruments designed in other contexts were not questioned in terms of relevance and appropriateness to the South African context, or tested for their validity prior to their utilisation in a proposal. This was particularly evident in the proposals examined by the Education and Psychology Advisory Panels”.

Plan your investigation in phases, setting measurable target dates where feasible.

9. Delineation of the research

Delineate the boundaries of your research, e.g.:

- A study of engineering firms with fewer than 500 employees.
- Plants that grow in the Western Cape only.
- A study of patients in clinics and hospitals in Gauteng.
- 220v AC systems, etc.

It might be helpful to indicate what will not be covered by your research.
10. **Significance of the research**

Indicate the significance of the research. Why is it important? Whom, or what industry, will it benefit? This is usually vital for funding.

11. **Expected outcomes, results and contributions of the research**

What are the expected outcomes and what do you wish to achieve, e.g.:

- A new theory
- A prototype
- A new model
- An artefact
- A new plant process
- A solution to a practical problem
- A specific aid to practitioners in a particular field
- An instrument of use in the mining industry, etc.

What contribution will this research make to the body of knowledge in the particular field of study?

For funding purposes, the NRF Evaluation Guidelines specifically require that the expected outcomes be clearly defined, as well as the likelihood that the research will achieve the expected results within the stated timeframe.

12. **References cited**

This is a list of the literature referred to in your research proposal. Do not include titles not cited, or that have no relevance to your research problem. You should have read the references you list (or at least the relevant parts). Indicate how they relate to your research.

Distinguish clearly between a list of References cited and a Bibliography. The latter includes all material consulted, including background reading not necessarily cited. Alternatively you may provide separate lists of References Cited and Other References.

13. **Summary**

This is a concise summary (250 words maximum) of what appears in the proposal. It should not provide new material by referring to aspects not previously discussed.

14. **Keywords**

Give up to ten specific keywords or phrases, which will be used to index your research in relevant databases.
OPTIONAL FEATURES

Depending on the requirements of the particular department in which you intend to register, or the advice of your supervisor, there are a number of additional features which you could incorporate:

Contextualisation

If your research is multi-disciplinary, clarify which disciplines it covers, in which discipline the main thrust lies, and what interdisciplinary interaction there is with other disciplines or fields of study. Make the context of your research quite clear, e.g., does it fall within the sub-discipline of Industrial Relations, which resorts under the discipline of Human Resource Management, or does it address legal aspects of Industrial Law and thus resort under Law.

Planning and time parameters

Funding agencies find it especially useful if you give some provisional indication of what time parameters you are setting for your research and what the expected completion dates for the specific sections and tasks are.

Equipment, materials and infrastructure

"Infrastructure" includes equipment, facilities and support services. The NRF Evaluation Guidelines specifically enquire whether the available equipment and facilities (together with the appropriate maintenance plans) are suitable to support the research.

Pilot study

In some projects a pilot study should be done. Your supervisor should advise you. When little information about the proposed research project is available, it is advisable to execute a pilot study on a few selected aspects of the research proposal. A pilot study could:

- check the methods to be used
- collect data on which the actual sample size will be based
- iron out some practicalities of the project.

The pilot study may appear under a separate heading, or may be incorporated as a subsection under Research Design, where the preliminary pilot study findings may serve as a basis for the actual research design.

Interface with other institutions/industry

Here you may clarify to what extent your research will be undertaken by utilising the facilities of other institutions or companies, or whether you will have access to expertise at other institutions. Some funding agencies view such interaction in a positive light.

Budget

For large projects it is useful to include a simple budget, stating cost of equipment, running and travel costs, salaries of research assistants, etc.
EVALUATION CHECKLIST FOR RESEARCH PROPOSALS

(This checklist incorporates the items used by government funding bodies in their evaluation of research proposals.)

1. **Problem identification**
   1.1 Is the problem/line of enquiry clearly defined?
   1.2 Is the basic research problem well formulated, or is it poorly and vaguely structured?
   1.3 Is it briefly and concisely stated?
   1.4 Does the researcher indulge in jargon which obscures rather than explains what the research problem is?

2. **Background to the research problem**
   2.1 Has there been an adequate description of the background to the problem either under a separate heading or as part of the literature?
   2.2 Has the area of concern regarding the problem been identified, i.e., has the need that exists to research the problem been clarified?
   2.3 Have the basic terms and concepts been clarified, either under a separate heading, or as a suitable sub-heading?

3. **Literature review**
   3.1 Is there clear evidence of a thorough review of the literature?
   3.2 Is there a theoretical engagement with the relevant literature?
   3.3 Does the literature review provide an adequate theoretical framework for the study?
   3.4 Has the candidate taken the review of the literature as a perfunctory task with no contribution to or advancement of the intellectual debate?
   3.5 Has appropriate literature been examined in order to provide the background and rationale to the problem and its formulation?
   3.6 Have relevant sources been used to identify the problem?
   3.7 Does the literature review correspond with the aims of the research?
   3.8 Are the cited references acceptable?
   3.9 Are textual references and bibliographic citation correct?

4. **Conceptual framework**
   4.1 To what extent are the conceptual framework and theoretical assumptions clearly stated?
   4.2 Has the study been clearly delineated under a separate heading or sub-heading, i.e., have the boundaries of the research been stated?
   4.3 Has a suitable hypothesis (or hypotheses) been formulated, or has a suitable research question (or research questions) been stated?

5. **Objectives**
   5.1 Have the objectives been stated clearly?
   5.2 If there are more than three objectives, have they been divided into main and subsidiary objectives?

6. **Research design**
   6.1 Is the project and research design well structured and outlined, or is it poorly articulated?
   6.2 Has the research methodology been articulated clearly?
6.3 Is there a clear correspondence between the stated aims of the research and the chosen methodology?
6.4 Is there a mere statement of the qualitative or quantitative research methods to be used, or is there justification for their use?
6.5 If measuring instruments were designed in other contexts, have they been suitably evaluated in terms of relevance and appropriateness to the South African context, or tested for their validity before use?
6.6 Have the sampling methodology and data collection been adequately clarified?
6.7 Is the analysis appropriate to the aims of the research?

7. **Significance**

7.1 To what extent will the research make an original and creative contribution to knowledge (at doctoral level)?
7.2 Alternatively, to what extent will the research analyse and diagnose a particular problem, set it out logically, arrive at conclusions and make proposals for the solution of the problem (at master’s level)?
7.3 Why is it important to undertake this research? Whom will it benefit or to whom will it be important?
7.4 Is the proposed research likely to promote further investigation within and/or across disciplines and fields?
7.5 Has the expected outcome (or outcomes) of the research been clearly identified?

8. **Feasibility**

8.1 Is the problem researchable and is it feasible? Do the preliminary data and available resources support its feasibility?
8.2 Does the candidate’s academic profile or potential support his/her ability to accomplish the project?
8.3 Does the supervisor (or supervisors) have a research and supervision profile to support the candidate?

9. **Other general comments**

Is the proposal well structured or poorly compiled? If the latter, what should be done to make it a well-structured proposal?

10. **Language**

Has the research proposal been proofread and edited?