

FORMAT FOR WRITING OF PROPOSALS AND THESIS IN THE SCHOOL OF ENGINEERING AND TECHNOLOGY

The school of Engineering and Technology has proposed two types of final research Thesis write-up. The choice of the type of Thesis to adopt entirely depends on the experience and expectations of the student, in consultation with the supervisors and verified through written consent agreements to the graduate school.

1. DISSERTATION OR MONOGRAPH BASED THESIS

At the proposal development stage, it is herein recognized that the students have, at least, scanty idea of the intended work in terms of the technical uncertainties and actual research challenges. The school has therefore, proposed a format that should instill the key (re)search skills related to identifying, diagnosing, partitioning and presentation of the possible problem solution. In generally, the following general points are important to note while drafting the proposal and Thesis in the school:

A. LANGUAGE

The proposal/Thesis should be written in clear and precise English Language. To achieve this level, we have proposed at least two presentations, one at department level and the other at the school level to allow the students to generate sufficient ideas and receive useful comments.

B. SUPERVISION

The general University rules as relates to quality supervision shall apply. Nonetheless, the school would like to emphasis the need for quality supervision to enable the students attain high level training in the relevant fields. We thus recommend supervisors with a good record of teaching experience and academic publications since dissemination forms the core of academic promotion. In cases where it is proven that the study cuts across at least three major fields, up to three supervisors can be allowed to mentor the student.

C. FONT FORMAT

Generally, the school strongly recommends that the proposal/Thesis be largely drafted in one of the three proposed font types namely: (i) Times New Roman, (ii) Arial (iii) Garamond. In captioning the Tables or Figures however, the students may choose to vary the font for clarity purposes. A font size of 1.5 is

recommended for the final proposal or thesis. The following key title layouts are proposed in terms of the overall format:

I. TITLE PAGE

The title page should be short, clear and precise. Unless proven necessary during the faculty presentations, the title should contain at most 21 words, and should clearly capture the objectives of the research.

II. DECLARATION PAGE

The page should contain a short binding statement declaring the novelty of the proposed work. The statement should also declare that that the work has not been presented elsewhere for an academic award of Diploma and Degree. The page should duly signed by the student and the respective supervisors.

III. OPTIONAL PAGES

This may include pages DEDICATION and ACKNOWLEDGEMENTS in cases where the student may want to express his personal outlook. These however, are considered by the school as optional.

IV. ABSTRACT

A focused abstract should be provided to outline the basis of the study. It should therefore touch on the problem, objectives, methods and expected results and conclusion. For a Thesis, there may be need for paragraphs especially if it is long to ensure clarity. For a publication based Thesis normally one paragraph in each paper is sufficient.

V. TABLE OF CONTENT (TOC)

The TOC should largely capture the first four levels. Generally, up to three levels should be sufficient, with the fourth used only if necessary to avoid ambiguity. The TOC should be numbered in consistent manners i.e.

6. *IMPACT OF CLIMATE CHANGE ON HUMAN RESOURCES.*

6.5 *Results and Discussion*

6.5.1 *Observed Impacts*

6.5.1.1 *Event Efficiencies in 1860*

...

7. *IMPACT OF CLIMATE CHANGE ON NATURAL RESOURCES.*

V. LIST OF FIGURES (LOF)

The LOF should be clearly captioned and labeled. Two formats are proposed for the labels. (1) Consistent and continuous labeling throughout the entire proposal/Thesis i.e. Figure 1, 2,..., 100. (2) The second format is continuous labeling according to the title level in the TOC i.e.

Figure 6.1 Location of the XYZ Machines

...

Figure 7.1 Impact of Climate Change on XYX

VI. LIST OF TABLES

The section should be formatted as the List of Figures. The school proposes the use of roman numbers for clarity.

VI. ABBREVIATIONS AND/OR NOMENCLATURE

These sections should be included in cases where more specific and technical terms are used in the proposal/Thesis. Nonetheless, the full meaning must be defined when within the text, the first time the abbreviations are used.

1. INTRODUCTION

The introduction should be precise and capture more detail of the work. The section should include, but not limited to:

1.1 Preamble/Background

1.2 Problem Statement

1.3 Justification

1.4 Objectives

2. THE STUDY AREA

The study area should be defined explicitly in terms of reason for choice, data and location. Where possible, the map of the area should be provided. The chapter should also state on the suitability of the datasets for use in addressing the objectives. It is important to note that for experimental work such as design of a machine this section may not be directly necessary.

3. LITERATURE REVIEW

This section can be explicitly stated in the proposal/Thesis. Where possible, the subsection can be in terms of the proposed objectives. However, it is

important that objectives are thoroughly reviewed and documented. This will, in a way, justify the selected methods for the study.

4. METHODOLOGY

The theoretical or empirical concepts of the methods should be well defined. In cases where lots of formula is involved, it is important for the student to provide only the key equations. In the cases of broad objectives, the student can choose to present the methods in line with the objectives.

5. RESULTS AND DISCUSSION

Generally, the results section can include preliminary analysis results obtained towards fulfilling the objectives. Such results should be procedurally explained in the build-up to the objectives. If possible, the main research results should be explained in line with the objectives. The figures and Tables used should be well explained and discussed in the context of the study. In case of 'negative' results, it is important to provide some level of justification. If possible, the results should be interpreted or related to real life answers.

6. CONCLUSIONS AND RECOMENDATIONS

The research conclusions can be positive or negative, should focusing on the challenges of the work. Based on the results, the conclusions should provide some measure of the success of the work. The 'reasons' as to why the work was not to the expectation can be the basis of recommendations.

7. REFFERENCES

The format of the references can be standardized in the University. Nonetheless, we recommend the following format as cited in the example below:

(a) Journal:

Saghafian B., Farazjoo H., Bozorgy B., Yazdandoost F. (2007). Flood Intensification due to changes in land use. *Water Resources Management (Springer)* 22, 1051–1067. DOI: [10.1007/s11269-007-9210-z](https://doi.org/10.1007/s11269-007-9210-z)

(b) Book:

Singh V.P. (1995). *Computer models of watershed hydrology*. Water Resources publications: Highlands Ranch, Colorado, USA.

(c) Book Chapter:

Awiti A.O., Walsh M. G., Omuto C. (2002). Consequences of land cover change: Land management and policy options. In: *Reversing Environmental and Agricultural Decline in the Nyando River Basin*. Eds: Mungai D., Swallow B., Mburu J., Onyango L., Njui A. Kisumu, Kenya.

8. APPENDICES

This is a section may include the following:

- Design calculations
- Detailed engineering drawings and attachments
- Raw data and Initial analysis programs
- Computer simulation programs

9. PUBLICATIONS

List of publications can be inserted as the last page.

2). A PAPER BASED THESIS

In this case, the school has proposed that at least three research papers published in International Peer Review journals as a first author after following the study research is worth awarding a PhD. In the case of MSc. degree, at least two peer reviewed International journal papers can be accepted as the accredited worth. By definition, the International Journals must be part of Science Citation Index (<http://ip-science.thomsonreuters.com/cgi-bin/jrnlst/jloptions.cgi?PC=K>). If this format is adopted for disseminating the study, the review comments must be presented to the graduate school for verification of the correct impact factors during the final Thesis presentation. The graduate school may also choose to allow an external or internal examiner to verify the quality of the overall content of the Thesis.

To provide a clear distinction of this format and the first one, it is important for the student to note the following points:

If the papers are accepted and already published online, the student will be expected to write a short outline of the Thesis to include mainly: The Title page, Declaration, Acknowledgement, A short general Introduction of the entire work, the entire content of accepted and published research papers in a consistent manner, and lastly, the overall Conclusions and Recommendations. The appendix can be included to contain the relevant materials used in the research work.

NB:

(i) If the student and the supervisors elect this option as reflected through signed agreements to the graduate school, the student will not be allowed to graduate without publication of the accepted research papers.

(ii) If the papers have been forwarded but no feedback received from the International Journal reviewers, the student will be expected to adopt the first type of Thesis writing described above (i.e. Monograph based Thesis). He can elect to include the proposed abstract of the journal papers in the appendix. If the student and the supervisors elect this option, as reflected through signed agreements to the graduate school, the student can be allowed to graduate normally if the monograph/dissertation is accepted by the recommended internal and external reviewers.