



# MERU UNIVERSITY OF SCIENCE & TECHNOLOGY

---

P.O Box, 972-60200 Meru-Kenya

**Phone:** +254 712524293, 254 725330826, +254 705790660, +254 2092048, +254 706364687  
+254 6430320

**Email:** [info@must.ac.ke](mailto:info@must.ac.ke) **Website:** [www.must.ac.ke](http://www.must.ac.ke)

## SCHOOL OF COMPUTING & INFORMATICS

## PROJECT PROPOSAL WRITING GUIDELINE

By

Dr. Makau Mutua, Ph.D

- JANUARY, 2019 -

## Preface

## **Abstract**

During a student's undergraduate academic journey, development of project proposals remains pertinent towards ensuring that the practical skills are well harnessed and nurtured. This guideline is intended to help the student in drafting the project proposal before embarking on the implementation of the intended project. Whereas the guideline assumes that the project is project is software based, it can be edited to work also for hardware based projects. The project proposal forms a fundamental part of undergraduate study in lieu of the undergraduate project. In order to enhance the quality of the students' projects and documentation standards, this document will serve as the project proposal writing guideline for all students in the school of computing and informatics.

## Table of Contents

<b>Preface .....</b>	<b>2</b>
<b>Abstract .....</b>	<b>3</b>
<b>Table of Contents .....</b>	<b>4</b>
<b>CHAPTER ONE:INTRODUCTION .....</b>	<b>6</b>
1.0 Overview .....	6
1.1 General Proposal Format .....	6
1.2 Organization of the Document.....	8
<b>CHAPTER TWO: TITLE PAGE AND PRELIMINARY PAGES.....</b>	<b>9</b>
2.0 Overview .....	9
2.1 Title Page .....	9
2.2 Declaration and Certification Page .....	9
2.3 Abstract.....	10
2.4 Table of Contents .....	10
<b>CHAPTER THREE: PROPOSAL MAIN BODY .....</b>	<b>12</b>
3.0 Overview .....	12
3.1 Chapter One: Introduction .....	12
3.1.1 Background Information.....	12
3.1.2 Problem Statement .....	12
3.1.3 Objectives .....	13
3.1.4 Significance of the Project .....	14
3.1.5 Scope of the Project.....	14
3.1.6 Limitations of the Project .....	14
3.1.7 Expected Outcomes .....	14
3.2 Chapter Two: Literature Review.....	14
3.3 Chapter Three: Project Methodology .....	15
3.4 Appendices.....	17

APPENDIX I: SAMPLE TITLE PAGE .....	17
APPENDIX II: SAMPLE DECLARATION AND CERTIFICATION PAGE .....	18

## CHAPTER ONE:INTRODUCTION

### 1.0 Overview

This sets the guiding principles of this guideline. In section 1.1, the general proposal format is presented and the organization of the rest of the document is then outline in section 1.2

### 1.1 General Proposal Format

The project proposal comprises of five main parts namely;

- i. Title Page
- ii. Preliminary Pages
- iii. Main Body
- iv. References
- v. Appendices

Each of these play a crucial role in piecing up together the student's ideas and therefore work in synergy to provide the desired clarity of a project proposal. In the following subsections, we discuss what comprises each of the parts and the format guidelines that should adhered to.

- i. *Title Page:* This is the very first page of the document and is not numbered. The page should contain the University name, proposal title, student's details, predefined caption (*A Project Proposal Submitted to ...*) and the date of submission. The University name, student's details and date should be written using Times New Roman font style and size 14.
- ii. *Preliminary Pages:* These provided necessary maiden information that should precede the main body of the proposal. The desired pages for the project proposal include the declaration page, abstract, Table of Contents (TOC), List of Figures (if any), List of Tables (if any) and List of Abbreviations (if any). All the preliminary pages should be numbered using the Roman numbers (i, ii, iii...).
- a. *Declaration & Certification Page:* This serves as the first numbered page of the document. It contains the student's commitment that their work is not plagiarized and a certification by the supervisor(s).

- b. *Abstract:* This section provides a summary of the whole proposal. It should therefore be comprehensive enough to give the reader an overall understanding of the proposed work.
  - c. *TOC:* A table of contents presents the outline of the whole document's titles and the pages where they are found. The TOC should only present up to only three heading levels all justify aligned and zero indentation for the levels.
  - d. *List of Figures/Tables/Abbreviations:* If the documents contains figures or tables or acronyms/ abbreviations, then these should be presented after the TOC and the pages where they are contained.
- iii. *Main Body:* The main body of the proposal contains three main chapters which all should be numbered using the Arabic numerals (1, 2, 3....). The chapters are Introduction, Literature Review and Project Methodology respectively.
  - a. *Chapter One: Introduction:* This section sets the background of the project. It provides a justification to why the project is worthy doing, the objectives to be achieved as well as the problem to be solved. These are ordered as shown below;
    - 1.0 Overview
    - 1.1 Background Information
    - 1.2 Problem Statement
    - 1.3 Objectives
      - 1.3.1 Main Objective
      - 1.3.2 Specific Objective
    - 1.4 Significance of the Project
    - 1.5 Scope of the Project
    - 1.6 Limitations of the Project
    - 1.7 Expected Outcomes
  - b. *Chapter Two: Literature Review:* This section requires the students to conduct an intensive study of similar or related projects and studies that have been undertaken before to avoid plagiarism. Each of the presented works should be well cited using the APA in-text guidelines.
  - c. *Chapter Three: Project Methodology:* The methodology section comprises of the following sub-sections.

### 3.0 Overview

#### 3.1 Development Approach

#### 3.2 Data Collection Procedures

#### 3.3 Data Collection Instruments

3.3.X Specific instruments used e.g. Questionnaires, Interviews, observations e.t.c.

#### 3.4 Data Analysis/ Requirements Elicitation

#### 3.5 Project Requirements

##### 3.5.1 Software Requirements

##### 3.5.2 Hardware Requirements

- iv. *References:* All the literature sources cited in the work should be enlisted in this section using APA citation style.
- v. *Appendices:* The content that cannot be fitted in the above four sections is considered an addendum hence included as part of the appendices. The key annexures that must be included are the project schedule, the budget and the data collection tool(s) as listed below;
  - Appendix A: Project Schedule
  - Appendix B: Budget
  - Appendix C: Data Collection Tool(s)

## 1.2 Organization of the Document

The remaining of the document is organized as follows. Chapter two outlines the details of the title page and the preliminary pages and chapter three discusses the main body of the proposal. Finally, various samples are presented in the appendices.



## CHAPTER TWO: TITLE PAGE AND PRELIMINARY PAGES

### 2.0 Overview

The focus of this section will be to provide the nitty gritty of the initial pages of your document. It will detail the expected formatting specifications that need to be adhered to in order to produce standardized proposal reports.

### 2.1 Title Page

As earlier noted, this is the first page of your document and **MUST** not be numbered. The content herein should be written in Times New Roman font style and size 14 as shown below; except for the title which is of size 16. Kindly note that the title of the proposal is written in uppercase and bold. A complete sample is attached in Appendix I.

## **A SAMPLE UNDERGRADUATE PROJECT PROPOSAL TITLE**

By

Surname MiddleName Other(s)

A Project Proposal Submitted to the School of Computing and Informatics in  
Partial Fulfillment of the Requirements for the Degree of Bachelor of Science in  
<<Your Degree Name>> of Meru University of Science and Technology

- **Month Year** -

### 2.2 Declaration and Certification Page

This serves as the first numbered page of the proposal. Like all the other preliminary pages, it should be numbered using roman numbers. It contains the student's commitment that their work

is not plagiarized and thus a student must understand the consequences of presenting plagiarized work as theirs. It also contains a certification section which is countersigned by the supervisor(s) as proof that the work was undertaken under their guidance as shown in Appendix II.

### 2.3 Abstract

The abstract summarizes all the details of the proposal. It should contain between three hundred (300) and five hundred (500) words written in single line space and justify aligned. The abstract should comprise of all the key area of the proposal. The key areas that must be addressed include the background information, the problem statement, the objectives and the methodology adopted for the project. The abstract should be written in prose form with no bullets, numbering or paragraphs. The font style should be Times New Roman with font size of 12 points.

### 2.4 Table of Contents

A list of all the headings in the document must be outlined and the page numbers where they are contained. The heading and the page number should be separated by ellipsis as illustrated in Figure 1.1. The only acceptable heading levels are three. The text should bear 1.5 line spacing, font size 12 and all content justify aligned. In addition to the contents of the proposal, a new page should be inserted for the List of Figures, List of Tables and List of Abbreviations if any of these are in the document. All these must be generated automatically using an appropriate word processor.

It is worth noting that each figure must be captioned based on the chapter where it is contained. For instance, the first figure in chapter will contain a caption of Figure 1.1 and the details, all the subsequent images in the chapter will be numbered in a continuous manner, e.g. Figure 1.2, Figure 1.3. Similarly, chapter two figures will begin with Figure 2.1 and onwards. The caption should be italicized, center aligned and of font size 11.

<b>Table of Contents</b>	
<b>DECLARATION AND COPYRIGHT.....</b>	<b>I</b>
<b>CERTIFICATION .....</b>	<b>II</b>
<b>ACKNOWLEDGEMENTS.....</b>	<b>III</b>
<b>ABSTRACT .....</b>	<b>IV</b>
<b>TABLE OF CONTENTS.....</b>	<b>V</b>
<b>LIST OF TABLES .....</b>	<b>VIII</b>
<b>LIST OF FIGURES .....</b>	<b>IX</b>
<b>LIST OF ABBREVIATIONS.....</b>	<b>X</b>
<b>CHAPTER 1: INTRODUCTION .....</b>	<b>11</b>
1.1 Background to the Problem.....	11
1.2 Problem Statement .....	14
1.3 Objectives.....	15
1.3.1 Main Objective.....	15
1.3.2 Specific Objectives.....	15
1.4 Research Questions .....	16

*Figure 1.1: Sample Table of Contents*

## CHAPTER THREE: PROPOSAL MAIN BODY

### 3.0 Overview

This chapter discusses the parts of the main body of a proposal. In section 3.1, the contents of chapter one are explained. In 3.2, the writing of the literature review chapter of the proposal is discussed in detail. Sections 3.3 and 3.4 present the project methodology chapter and the expected appendices respectively.

### 3.1 Chapter One: Introduction

Introduction forms the first main chapter of the proposal report. It appears immediately after the table of contents or list of figures/Tables/Abbreviations if they are present. Consequently, it should be numbered continuously from the previous preliminary pages. However, the numbering format should assume the Arabic numerals (1, 2, 3....). The main parts of this chapter are presented in the subsections that follow.

#### 3.1.1 Background Information

This section is very crucial in the project proposal. It provides a detailed background to the proposal to be undertaken. Note that it bears the crucial name *background* hence make sure it leads the research problem by giving evidence from the previous works. Consequently, it should be based on literature review. Literally, background information is a summarized literature review which should be selective and critical

Be sure to (1) make clear what the research problem is and exactly what has been accomplished; (2) to give evidence of your own competence in the field; and (3) to show why the previous work needs to be continued. The literature review should be selective and critical. Discussions of work done by others should lead the reader to a clear idea of how you will build upon past research and also how your work differs from theirs.

#### 3.1.2 Problem Statement

A good problem statement has the following characteristics:

- It should be specific and not ambiguous. Ensure that the proposed project is quite specific to the problem that you want to address.
- It should be relevant to the times and fill a gap. A good problem should identify a gap that is inherent in the existing systems or fill a gap that has been filled.

- It should be practical. A problem statement should be guided by the background research that one conducts. This implies that the proposer should be aware of the potential technologies to implement the project, the required materials for the same and the resources (in terms of time, money and scope). It is this knowledge that informs the need for the budget in a proposal.

### 3.1.3 Objectives

An objective needs to be **s**pecific, **m**easurable, **a**chievable, **r**ealistic and **t**ime-bound (SMART). Looking at these characteristics, they closely related to the above stated of an appropriate problem statement. It therefore follows that if the problem statement is clearly stipulated, the objectives shall be SMART.

In a software related project, certain terms are expected in objectives which include elicitation of software requirements, analysis, design, development, testing and deployment. Using these keywords, the SMART principle can be addressed as illustrated in the table 3.1.

<i>Objective</i>	<i>Measure (Metric of measurement or outcome)</i>	<i>Time</i>
i. Elicit the requirements of an automated skin disease detector	System Requirements	1 month
ii. Analyze the elicited requirements of an automated skin disease detector	Software Requirements Specification (SRS)	2 Months
iii. Design an automated skin disease detector	Software Design Specification (SDS)	3 months
iv. Develop the automated skin disease detector	Prototype or the system itself	1 month
v. Test the developed automated skin disease detector	Test cases and test results	1 month

*Table 3.1: Illustrating SMART Objectives*

From this table, each of the objectives has a time frame associated with it and its measurability can be gauged using the associated metric. It is also very specific and achievable if the required effort(s) are injected in it.

### 3.1.4 Significance of the Project

This section presents the reasons for doing the work – such as the needs the project will fill and why the work should be done. It details the main contributions that the project will present to its users, society and the knowledge domain once it's completed.

### 3.1.5 Scope of the Project

An undergraduate project may be a module of an intended larger project. This is usually as a result of the available time for the student to complete the project and the available resources as well. Similarly, some students may be involved in a group project hence the need to be specific on the module(s) that a student will accomplish in order to guide the assessors. This section allows a student to clearly stipulate what their project will achieve and thus it should be guided by the objectives and the problem statement.

### 3.1.6 Limitations of the Project

This section the shortcomings that the project may experience. For instance, a student developing a location based application may stipulate that the project will not serve the clients who do not have a smart phone. Nevertheless, though the section allows the outlining of the limitations, the expectation is that the writer provides a potential solution to it. Using the above example, the user may include a qualification that asserts that, besides the application, a premium USSD based service shall be available to support such clients.

### 3.1.7 Expected Outcomes

This section is usually optional. Nevertheless, the student should have a clear mind of what they expect to achieve once the proposal is approved. These at times aid in creating a mental picture to the examiners who may not have all the time to go through the whole document in order to ascertain the viability of the project.

## 3.2 Chapter Two: Literature Review

Even though this section comes as the second chapter of the project or research proposal, it is actually the starting point of the study work. Ideally, any good work should be informed by the existing works. It is from the intense study of literature that the existing gaps are identified which inform the problem statement. Any system that has been implemented is always accompanied by a documentation. Some of these documentations help in highlighting the shortcomings of the system which may be solved through additional modules or patches.

The best way to write this chapter is using the funnel based approach. In the funnel based approach, the work begins with what is broad heading to the specific area. Considering the case of the student implementing a location based application, let's assume the focus is in emergency responses. A good literature review may bear some headings as follows;

*2.1 Concepts of Location Based Services (LBSs):* This section may explore the importance and use of location based services. It should be written in a simple language such that any reader not vast with the idea can somehow comprehend what the technology entails.

*2.2 Location Based Services Applications:* Here, the student may explain the various application areas where location based services have been applied. It should be written in a summarized but coherent manner.

*2.3 Location Based Services in Emergency Response:* Whereas this is surely an application area of the LBSs, it is the focus of the student and thus should be given more emphasis. The writer should ensure that this section is comprehensive enough to inform the reader and further convince him of the need to have such a system.

*2.4 Review of Related Projects/Works:* The writer provides a critical review of existing works and projects. A good approach would be to provide a brief description of the work or project in a paragraph, highlight the strengths of the same in the next paragraph and in the third one provide a critique in the next in which its gaps are identified.

*2.5 Proposed Project Framework:* This section provides an outline of the overall project most preferably in a block diagram. For instance, using the LBS case of emergency response, Figure 3.1 may suffice.

### 3.3 Chapter Three: Project Methodology

The third chapter of the proposal explains the proposed plans and methods that should correspond to the objectives of the research study. The research methodology must include the following:

- Design. It must be appropriate to the requirements of the research problem. Since a software project entails a section of requirements elicitation, the expectation is that the design shall include the ordinary research designs (e.g. qualitative research design) and the software design paradigms like the object oriented analysis and design (OOAD).
- Respondents. The respondents of the study are identified in this section. They are the subjects of the survey or interview or participants of the focus group discussion mainly used in acquiring the system's requirements
- Sampling Design. The sample size is discussed in this section, and together with it the process by which the sample size was derived. Statistical sampling techniques are expected here with the appropriate explanation and justification of the choice of the sampling technique. These include but not limited to random sampling, stratified sampling among others.

- Instrumentation. The research instruments used for data collection will be presented here. The components of the questionnaire, interview schedule, focus group discussion, guide, etc. should be made explicit.
- Plan of Analysis. This section indicates how exactly all the information obtained in the research instruments will be used and analyzed to arrive at the various modules of the system.

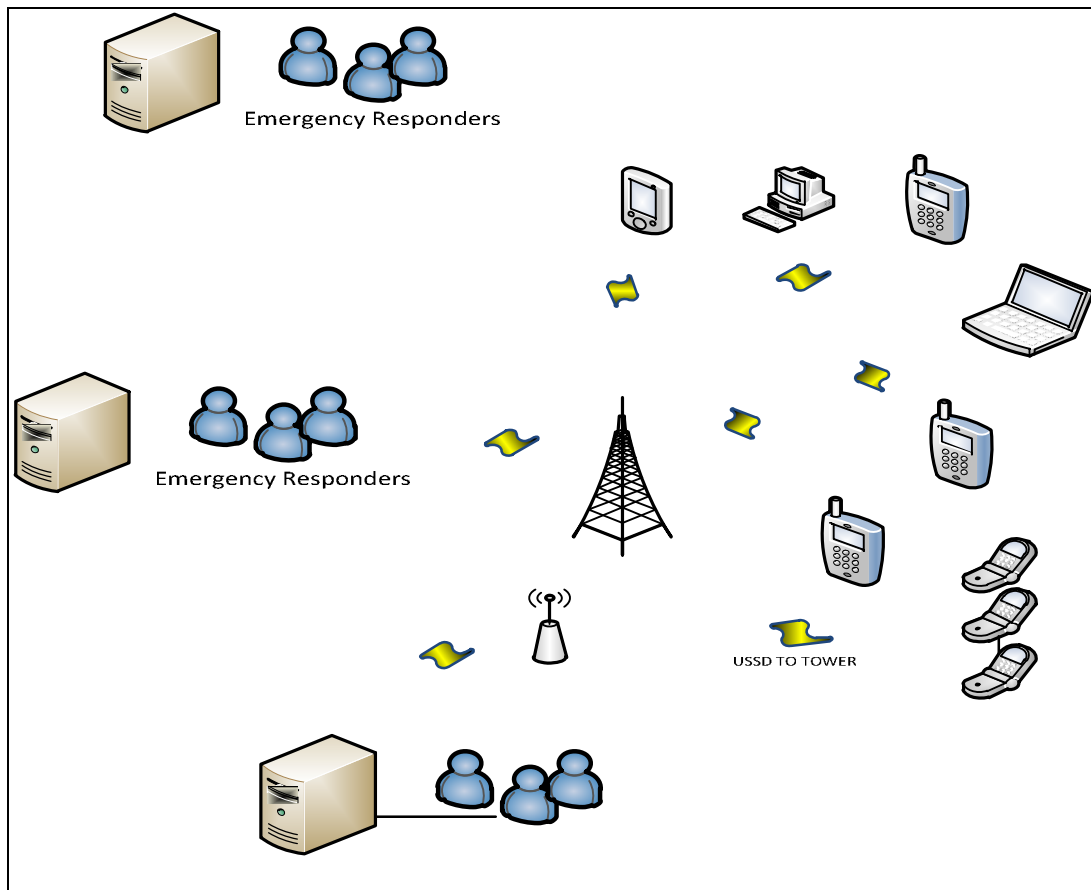


Figure 3.1: Sample Project Framework



### 3.4 Appendices

#### **APPENDIX I: SAMPLE TITLE PAGE**

## **A SAMPLE UNDERGRADUATE PROJECT PROPOSAL TITLE**

By

Hamisi Mwanafunzi Mzuri

A Project Proposal Submitted to the School of Computing and Informatics in  
Partial Fulfillment of the Requirements for the Degree of Bachelor of Science in  
Computer Technology of Meru University of Science and Technology

- **January, 2019** -

## APPENDIX II: SAMPLE DECLARATION AND CERTIFICATION PAGE

### Declaration

I declare that this proposal is my original work except for the cited works and has not been presented in any other University for an award of degree or any other award.

Hamisi Mwanafunzi Mzuri

CT20X/000/2030

Signature: \_\_\_\_\_

Date: \_\_\_\_\_

### Certification

The undersigned certify that they/he/she have/has read and hereby recommend for acceptance of Meru University of Science and Technology a Project Proposal entitled “A Sample Undergraduate Project Proposal Title”.

### Supervisor Name

Signature: \_\_\_\_\_

Date: \_\_\_\_\_

Designation, Department

Meru University of Science and Technology

P.O Box 972-60200, Meru, Kenya.