



Karatina University

**Department of Computer Science and
Informatics**

UNDERGRADUATE PROJECT PAPER GUIDELINES

**BACHELOR OF SCIENCE IN
COMPUTER SCIENCE**

**BACHELOR OF SCIENCE IN
INFORMATION TECHNOLOGY**

**BACHELOR OF SCIENCE IN
INFORMATION SCIENCE**

APRIL, 2016

1.0 INTRODUCTION

The project is a partial fulfilment of the Bachelor of Science in Computer Science, Bachelor of Science in Information Technology and Bachelor of Science in information Science degrees offered in the department of Computer Science and Informatics (IT) of Karatina University. The students are expected to write a well-articulated project paper in chapter format, with a length of 15,000 words. Students will undertake this project paper during the final academic year (4th). This guideline aims to provide students with a guide on how to go about the various stages of doing the project.

2.0. OBJECTIVES

The main objectives of the undergraduate project are summarized as follows:

- a) To provide students with the opportunity to integrate the knowledge and skills developed from the BBIT and BSc IT Programs;
- b) To provide students with the independent study and to develop the ability to organize work with a view to achieve specific goal and
- c) To undertake an academic project based on sound Technology, Business and Innovation Management principles and intellectual reasoning.

3.0. THE PROJECT PROCESS

The objective of this course is to work on a project that shows what you have learned during the course of your degree program and must also have the following qualities:

- a) be one that can be applied in society in one way or another
- b) be a system that can be marketable

4.0. PROJECT PAPER

Upon the supervisors' approval of the detailed project proposal, the students should proceed and prepare their project paper under the supervisor's guidance; the document should

- a) be written in past tense
- b) have a minimum of 35 and maximum of 50 pages of the main document
- c) have an appendix; a Minimum of 10 pages and Maximum of 20 pages and which consists of at least 4 pages of important and necessary code.

5.0. PROJECT PAPER ORGANIZATION

The Project paper should consist of three main parts;

a) The preliminary pages or front end

- This includes elements such as the title page, dedication, abstracts, acknowledgements, declaration form, table of contents, list of tables, figures and abbreviations.

b) The text or main body, usually divided into parts – chapters and sections

c) The supplementary pages or back end.

- The supplementary pages consist of references and appendices or annexes.

5.1. PROJECT PAPER SECTIONS

5.1. TITLE PAGE

- Should have the correct title, student details, and the degree programme with a statement on what the project should fulfil. Refer to the sample in Appendix A

5.2. DECLARATION PAGE

The page contains the student's declaration of the originality of the Project Report.

This declaration page **must be signed** by the student.

The declaration page is to follow the format and content as shown in Appendix B

5.3. DEDICATION PAGE

Students should include a dedication for the Project Report. The dedication must be brief, not more than one paragraph and must not contain any number, chart or photograph. Refer to sample in Appendix C

5.4. ACKNOWLEDGEMENT PAGE

Here you have the opportunity to thank the various people who have helped in the development of the project. It might include specific individuals who have given information, offered insights, or generally been supportive. Gratitude may be expressed to groups of people, like those who were studied, or fellow students.

Refer to sample in Appendix D

5.5. TABLE OF CONTENT

Table of content identifies the contents and organization of document. It is made up of

- section headings
- page numbers

The table of content **SHOULD BE GENERATED** using the respective word processor.

Refer to sample in Appendix _

5.6. LIST OF TABLES

Section consists of list of the table used in the report, indicating table no, its title and page no found.

Refer to sample in Appendix _

5.7. LIST OF FIGURES / ILLUSTRATIONS

Section consists of list of the figures or Illustrations such as diagrams, photographs, drawings, graphs, charts, maps etc used in the report indicating figure no, its title and page no found.

Refer to sample in Appendix _

5.8. CHAPTER ONE

Chapter one should be between a Minimum of 2 pages and Maximum of 3 pages and consist of the following sections

- i. **Introduction:** Introduction of the project area; How it operates and how the problem exists
- ii. **Background of the Study** – is a minimum of ½ page and maximum of 1 page
 - a. This is usually a detailed background information about the project/ research area and about the client. It should be clear on what business the client is involved in and how operations are currently conducted.
- iii. **Problem Statement(s)**
 - a. This is a statement of the problem the project is intended to address. It should clearly show the problem in the light of the project research and its contribution to the solution. Ideally it should originate from the way the organization currently performs its functions. Each problem should be stated clearly with a brief explanation on how it arises from the functions be undertaken.
- iv. **Objectives: -**

Clear, concise “SMART” objectives should be provided including project/ research and system development related objectives.

(S - Specific, M - Measurable, A - Achievable, R- Realistic/Relevant, T- Time bound/boxed.

The supervisor should guide the student on the minimum and maximum number of objectives as per his/her project. Key words like Investigate, develop and analyze should be used to list objectives.

- v. **Scope and Limitation of the Study** – a brief description of the project scope – what was covered and what was not and why?.
- vi. **Justification**;- student should justify their project by indicating the interestingness and challenge that the project presents, the timeliness of the idea, the possible advantages that realization of such a project would bring.
- vii. **Project Risk and Mitigation**;- This section should contain a list of project risks and the mitigations to these risks.
- viii. **Budget and Resources**;-This should generally address all the envisaged resources that will enable the development of the system to succeed. The key items are hardware, software, human and any other costs that will be incurred.
- ix. **Project Schedule**;- a brief description of the project work break down structure. Project Gantt and Network diagram clear showing the Critical path should be included in the appendix section.

5.9. CHAPTER TWO: LITERATURE REVIEW

The Literature review should have a minimum of 3 pages and maximum of 5 pages and should be done as per the objectives. It should **not** be just a compilation or reproduction of the works of others. It requires the student to examine and comment critically on the literature relevant to the student's project area or area of research.

5.10. CHAPTER THREE: METHODOLOGY

This is a minimum of 4 and Maximum of 5 pages.

The methodology chapter should describe a model/framework under which the system was developed. It should address at least the following areas:-

- The exact techniques used to collect facts and data
- Tools used to analyze the data and the processes
- Tools to implement and test the system
- Time schedule and project cost

5.11. CHAPTER FOUR: SYSTEM ANALYSIS AND REQUIREMENT MODELING

This is a Minimum of 8 pages and Maximum of 10 pages.

The chapter should address at least the following areas:-

- Description on how the current system works using system analysis modelling tools such as flow charts, DFDs, Use cases, UML etc.

- How the facts and the data gathered including the methods used
- Requirement definitions and modelling of the Current
- Requirement definitions and specifications of the project

5.12. CHAPTER FIVE: SYSTEM DESIGN

This is a minimum of 7 and Maximum of 10 pages.

This section should consist of a description of the system design, database design (conceptual, logical and physical) using an appropriate modelling tool.

5.13. CHAPTER SIX SYSTEM IMPLEMENTATION

This is a minimum of 3 and Maximum of 4 pages.

The chapter should address the following areas:-

- Tools used for coding and testing
- System test plan
- Testing: this should be explained in terms of the data used to test and the approach.
- Proposed Change-over techniques

A sample of the system code should be included in the appendix.

5.14. CHAPTER SEVEN: LIMITATIONS, CONCLUSIONS AND RECOMMENDATIONS

This is a minimum of 1 page and Maximum of 2 pages

The chapter has the following functions:

- Limitations: In this section you need to state some of the problems you encountered in the process of doing your research e.g. time factor, finances, anti- cooperative responses
- Conclusion: ties the results of the study to theory, practice and policy by pulling together the theoretical background, literature review, potential significance for application and results of the study.
- Recommendations: the section highlights suggestions and recommendations for further improvements in the system.

5.15. REFERENCE

This is a minimum of 1 page and Maximum of 2 pages.

References are the detailed description of resources from which information or ideas were obtained in preparing the Project Report. The details of every references cited in the text, published or unpublished, must be listed alphabetically in this page.

The APA system of referencing should be used (See the Karatina University APA guide at the Library)

Example.

BOOKS (one author)

1. Nye, J. S. (2008). *The powers to lead*. New York: Oxford University Press.
2. Boddy, D. (2005). *Management: An introduction* (3rd ed.). Harlow: Financial Times Prentice Hall.

5.16. APPENDIX

This is a minimum of 10 pages and Maximum of 20 pages.

Appendices are supplementary materials to the text. These include tables, charts, graphics, computer programme listings and so on that are too lengthy and inconvenient to include in the text itself.

Should include items such as;

- Organizational structure
- Instruments like document reviewed
- Interesting codes to a maximum of 4 pages
- Technical guide and users manual

6.0. GENERAL FORMAT OF WRITING THE PROJECT PAPER

PAPER

- Size - A4 (21.0cm X 29.7cm)
- Quality – A least 80gm weight
- Colour - White

TYPE OF PRINTING MACHINE

Students use a personal computer (PC) to type their project paper. Near-letter quality impact printers or laser-jet printers may be used. Any word processor software such as Microsoft Word or WordPerfect would be suitable to write the project paper. Students may also use Microsoft Excel, for tables, calculations or any other applications.

FONT SIZE AND TYPE

Candidates must use Times New Roman or Arial font. No other fonts are acceptable. Font Size:

- For text use 12-point font.
- For tables and figures, use 10-point.
- For title page 12-point font,
- For Table of Contents 12-point font.

Please type in bold for headings and subheadings. Headings should be typed in all upper case letters while sub-headings are to be typed in upper and lower case letters.

FONT STYLE

Only one font style (Times New Roman) may be used throughout the project paper, including the title page, approval page, acknowledgment, bibliography and appendices. Exceptions to this can only be made for tables/figures/illustrations imported from other sources. Italic variants of the same font style may be used for labels, foreign words, book titles or occasional emphasis. The usage of bold variants of the same font style and underlining in the text of headings and titles is at the student's discretion.

HEADINGS

Chapter headings are to be centered and written in bold, upper case letters. The font size for chapter headings is 14 point. Other sub-headings are to be aligned to the left margin and should be 12 point in font-size. Sub-headings should be in upper and lower-case. Underlining and boldface in the sub-headings is at the student's discretion.

PARAGRAPHS

Spacing between two paragraphs in the basic text should be set at 4.0 spaces. The first sentence of a paragraph should be indented to 6 spaces. A heading that appears, as a last line on a page will not be accepted. There should be a minimum of two lines of a paragraph at the bottom of the page under the heading.

PHOTOCOPYING

All photocopied material must be clear, clean and sharp. Photocopied material on any page should be numbered as part of the project paper and should be within the margins required by these guidelines.

LINE SPACING

The project paper should be typed on one side of the page. The text should be spaced (1.5) throughout, with single-spacing for exceptional circumstances only:

- Abstract
- Appendices
- Long headings or subheadings
- Long captions to tables, figures, or plates
- Bibliography
- Tables
- Quotations

TEXT JUSTIFICATION

Set the justification to 'full' and the margins to the following measurements:

- The left margin should be 4 cm (for binding purposes)
- 2.5 cm for the top, right and bottom margins.

7.0. PLAGIARISM

Making proper text citations and providing accurate referencing for quotations are crucial to help ensure that students do not intentionally, or otherwise, plagiarize the work of others. Plagiarism occurs when people steal the words, the ideas, and/or the work that rightfully belong to others and then present these words, ideas, and/or work as if this material were their own words, ideas, or works. Students are advised to pay serious attention to this matter, as it is a very serious offence to plagiarize the work of others. The best way to avoid plagiarism is to make proper documentation of the sources to which referred to in the project paper. Students are strongly cautioned that if there is evidence that a part or parts of a project paper has/have been plagiarized, the departmental examination board reserves the right to fail the student concerned and to report the student to the Disciplinary Committee of the University.

8.0 COVER BINDING AND SUBMISSION

Final submission of the project paper (upon approval), in three (3) copies must be in permanent hard or soft cover binding and submitted to Project Coordinator / HOD. A softcopy of the system on a CD MUST also be submitted in the original code of the application developed together with the softcopy of the project proposal, project final report and presentation slides.

9.0. PROJECT PAPER EVALUATION CRITERIA

Upon submission of the project paper (in soft-bound), endorsed by the supervisor, to the project Coordinator, the project document is first reviewed by the project Coordinator to ensure that it complies with the BBIT/ BSc IT Project Paper Guidelines. Project papers that deviate in form and presentation style from the Guidelines will be rejected and NOT sent for evaluation. The student will be informed and required to re-submit the project documentation, which conforms to the Guidelines. The project paper is then sent to the supervisor and one (1) examiner, appointed by the Project coordinator for evaluation and grading. The evaluation criteria used for evaluation and grading is as follows:

Item	Mark
Project Proposal and Preliminary approvals	30
Project Presentation	10
System Demonstration	20
Project Paper	40
Total:	100

NB: The students are warned that no grading of this course will be undertaken without completing and carrying out all above items. Change of project should be officially communicated by writing a letter to the project co-coordinator and getting approval, before changing.

APPENDIX A



KARATINA UNIVERSITY
SCHOOL OF PURE AND APPLIED SCIENCES
DEPARTMENT OF COMPUTER SCIENCE AND
INFORMATICS

➤ **PROJECT TITLE:**

BY: Name of Student

Reg. No

Date:

This project is submitted in partial fulfilment of requirement for the Karatina University award of BACHELOR OF SCIENCE IN *****

APPENDIX B

DECLARATION

I hereby declare that this project report is based on my original work except for citations and quotations which have been duly acknowledged. I also declare that it has not been previously and concurrently submitted for any other degree or award at Karatina University

Signature : _____

Name : _____

ID No. : _____

Date : _____

SUPERVISOR

I the undersigned do hereby certify that this is a true report for the project undertaken by the above named student under my supervision and that it has been submitted to Karatina University with my approval

Signature.....Date.....

APPENDIX C

(Sample)

DEDICATION

Specially dedicated to
my beloved grandmother, mother and father
(this dedication page is optional) (position
at centre of page)

APPENDIX D

ACKNOWLEDGEMENTS

I would like to thank everyone who had contributed to the successful completion of this project.

I would like to express my gratitude to my research supervisor, Prof. Dr. XXXXX for his/her invaluable advice, guidance and his enormous patience throughout the development of the research.

In addition, I would also like to express my gratitude to my loving parent and friends who had helped and given me encouragement.....

(This acknowledgements page is optional).....