

SCT 400 AND SIT 400

UNDERGRADUATE PROJECT PAPER GUIDELINES

(B.Sc. computer science, B. Information Technology)

**KENYATTA UNIVERSITY
SCHOOL OF ENGINEERING AND TECHNOLOGY
ICT DEPARTMENT**

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1.0 INTRODUCTION

The project is a partial fulfillment of the B.Sc. degree offered in the department of ICT of Kenyatta University. The students are expected to write a well-articulated project paper in chapter format, with a length of 15,000 words. The project must be related to your area of specialization. Students will undertake this project paper during the final academic year (4th year) and will be carried out in the two semesters of the academic year they registered

This guideline aims to provide students with a guide on how to go about the various stages of doing the project.

1.1 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 B.sc Program;
- 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.

1.2 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:

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

1.3 PROJECT DESCRIPTION

Before you start working on your project you **MUST** provide (submit) a project description for approval by the course Department Board (project coordinator) in **writing**.

The description comprises a project title, description of the project, in terms of area it's to be carried out, tools (a maximum of one page). You should also include your contact (email and telephone number where applicable).

In addition your project must show that you understand the concepts that you covered in your degree program, among them:

- Object Orientation
- SLDC
- Practical Functionality
- Mastery of SQL

- Decision Support Systems
- Database Design
- Distributed Systems
- Data Structures
- Digital / Analog Circuit design & analysis
- Interfacing electrical/electronic circuits with computer programs

For engineering projects, they **MUST** be able to interface any circuits and hardware used with computer program codes.

For projects demonstrating re-engineering or customization of software, a panel to evaluate viability may be appointed to listen to it before being allowed to start.

1.4 SUPERVISION

The Project coordinator arranges for every registered student to get a supervisor, who guides/advises the student throughout the process. However, students may request a change of the supervisor/s assigned, subject to the approval of the Project coordinator and or a Committee appointed by the chairman of the department, this request may be granted.

The title approval should be completed within the **first three weeks** of the semester the student has registered for the unit (SCT 400 or SCE 509).

Once given the confirmation on the project title and a supervisor assigned, students **must immediately** submit a copy of the approved project description and begin discussions with their respective supervisors on the first proposal draft report.

It is **mandatory** that students keep a log sheet, which should be duly signed by their supervisors each time they consult them, throughout the academic year. Supervisors may also opt to keep a carbon copy of the same. Supervisors may request students to submit a weekly summary of the project progress.

Supervisors should guide the students through the project and ensure the student is ready for the final presentation.

1.5 PROJECT PROPOSAL

This is the next stage after the approval and assigning of the supervisor. When considering the project proposal, students should look for a critical and analytical approach to the following:

- a. Specification of the goals of the project
- b. Outline of strategy and methodology for achieving goals
- c. Literature references with comments as to their relevance

- d. Understanding of the basic principles underlying the project
- e. Foreseeable problems and strategies for resolving them.

The proposal should be of reasonable length i.e. a minimum of 10 pages and a maximum of 15 pages in total, **EXCLUDING** appendices, tables and charts. Students should be aware of the level of academic standard required in the project paper. Students should also avoid having a scope of study that is too broad. It is advisable for students to ensure a scope of study that is parallel to the context of work expected and the time available. This will ensure that the project can be completed without a large number of unanswered questions.

The project proposal should include the following sections:

CHAPTER ONE:

This comprises the following;

INTRODUCTION; - this should be between a minimum of 2 and Maximum of 3 pages

- i). **Background of the Study** – is a minimum of ½ page and maximum of 1 page
- ii). **Problem Statement(s)**:- It should be stated in paragraph form.
- iii) **Objectives**: - only project objectives should be included and which should be SMART (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
- iv). **Scope and Limitation of the Study** – student should come clearly on how much he intends to cover in his/her project and why the much
- v). **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.

CHAPTER TWO:

LITERATURE REVIEW

It should have a minimum 3 pages and maximum 5 pages

The literature review for the project report, will eventually be a minimum of 10 pages and a maximum of 15 pages of relevant literature.

CHAPTER THREE:

METHODOLOGY

This is a minimum of 4 and Maximum of 5pages

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

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

Time schedule

This gives the breakdown of the events scheduled throughout the project lifespan and their timings. It should be a maximum of one page

Budget

This gives a breakdown of the cost involved to complete the project and is a maximum of one page.

Reference:

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

- Minimum of 3 books, 3 journals and 5 URL
- APA format to be used

NB:

The proposal should be written in 3rd person language/in plural.

1.6 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

- be written in past tense
- have a minimum of 35 and maximum of 50 pages of the main document
- 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.

1.6.1 THE ORGANIZATION OF THE PROJECT PAPER

The Project paper should consist of three main parts;

- The preliminary pages or front end
- The text or main body, usually divided into parts – chapters and sections
- The supplementary pages or back end.

The preliminary pages include elements such as the title page, dedication, abstracts in,

acknowledgements, declaration form, table of contents, list of tables, figures and abbreviations.

The supplementary pages consist of references and appendices or annexes. (Refer to Table 1 as an example).

Table 1: lists the major components of the project paper

No.	ITEMS	REMARKS
1.	Blank paper	Blank leaflet
2.	Title Page	Counted as page i, but not numbered (Please refer to Appendix B)
3.	Dedication (optional)	Listed In The Table Of Content
4.	Abstract	
5.	Acknowledgements (optional)	Listed In The Table Of Content
6.	Declaration	
7.	Table of Contents	
8.	List of Tables	Listed In The Table Of Content
9.	List of Figures/Illustrations	Listed In The Table Of Content
10.	List of Abbreviations, Symbols/ Specialized Nomenclature (optional)	Listed In The Table Of Content
11.	Main Body (Page 1 begins with Chapter 1)	To be paginated with numeral
12.	Bibliography/References	To be paginated, continuing with the numerals
13.	Appendices/Annexes	First sheet to be counted but not paginated (Insert a leaf with only the word APPENDICES at the centre of the page, followed by the actual appendices which are paginated)
14.	Blank	Blank leaflet

The following are additional sections of the main body in the project proposals,

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 tools like flow charts, DFDs, etc.
- How the facts and the data gathered including the methods used
- Requirement definitions and modeling of the Current system in terms of physical DFDs and Logical DFDs
- Requirement definitions and specifications of the proposed.
- Requirement definitions and Modeling of the proposed System in terms of physical DFDs and Logical DFDs. These should include processes and data modeling.

CHAPTER FIVE

SYSTEM DESIGN

This is a minimum of 7 and Maximum of 10 pages

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
- Testing: this should be explained in terms of the data used to test and the approach.
- Proposed Change-over techniques

CHAPTER SEVEN

LIMITATIONS, RECOMMENDATIONS AND CONCLUSIONS

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.

Reference:

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

- Minimum of 3 books, 3 journals and 5 URL
- APA format to be used,

example

- ***BOOK CHAPTER, ESSAY, or ARTICLE when author is credited***

de Paula, T. C. M., Lagana, K., & Gonzalez-Ramirez, L. (1996). Mexican Americans. In J. G. Lipson, S. L Dibble, & P. A. Minarik (Eds.), *Culture and nursing care: A pocket guide* (pp. 203-221). San Francisco: USCF Nursing Press.

JOURNAL ARTICLE (from an online database) (for more details, see the APA's official site)

Kavanagh, K., Absalom, K., Beil, W., & Schliessmann, L. (1999). Connecting and becoming culturally competent: A Lakota example. *Advances in Nursing Science*, 21, 9-31. Retrieved March 26, 2001 from ProQuest/Nursing Journals database.

Appendix

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

Should include items such as;

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

1.7 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. A softcopy of the system **MUST** also be submitted.

1.8 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 B.sc. 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	Points
Project Proposal and preliminary approvals	10
Project Presentation	20
System Demonstration	40
Project Paper	30
Total	100

NB:

The students are warned that no grading of this unit 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.

1.9 GENERAL FORMAT OF WRITING THE PROJECT PAPER PAPER

Size - A4 (21.0cm X 29.7cm)

Quality - Acid-free paper of at 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

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.

2.0 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 work”. 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.