**NIGERIA POLICE ACADEMY, WUDIL,**

**KANO STATE, NIGERIA.**

**DEPARTMENT OF COMPUTER SCIENCE AND MATHEMATICS**

****

**B.Sc PROJECT MANUAL**

**PREPARED BY: Dr. OLORUNPOMI, O.T.**

**September, 2018.**

**STRUCTURE FOR PROJECT PREPARATION**

**Cover page**

**Preliminaries pages**

1. Title Page
2. Certification
3. Dedication
4. Acknowledgements
5. Abstract
6. Table of Contents
7. List of Tables
8. List of Figures

**Main Body pages**

1. Introduction
2. Literature Review
3. Methodology / System Analysis and Design
4. Data Analysis, Discussion of Results / System Implementation and Testing

**Discussion**

1. Summary, Conclusion and Recommendations
2. References
3. Appendix or Appendices

**SAMPLE OF COVER PAGE**

The cover page which is a blanket covering for the project is shown in sample A below:

Title of work

Name of author All Centralized in upper case

Matriculation Number in Parenthesis

Date: - Month and Year at the bottom

**SAMPLE A (COVER PAGE)**

****

**DISCRIMINANT ANALYSIS OF HEALTHY AND DIABETIC CADETS**

**NJOKU, ROMANUS CHUKWUEMEKA**

**[NPA/3/08/0104]**

**OCTOBER, 2017.**

**TITLE PAGE**

The first page of the project is the title page. The title must be a concise abstract of the thesis specifically describing the study undertaken. It should be devoid of irrelevant articles and should be of reasonable length of not more than 18words.

Details of the title page are as follows:

* title of the project - To appear in upper case and Bold in font size 18
* author’s name; font 16, all Bold and in upper case , Surname first
* matriculation number in parenthesis - font 16
* author’s previous degrees, the awarding university and year; Font 12, full cap
* a statement of the requirements being met by the dissertation / thesis; Font 12, initial cap
* the name of the Department and Faculty - Font 12, initial cap
* the name and the location of the awarding Universities (in this case, Nigeria Police Academy, Wudil, Kano, Nigeria); Font 14, full cap
* the month and year the degree is awarded - Font 14, full cap.

**An example of the title page is provided in Sample B.**

**Sample B (TITLE PAGE)**

****

**DISCRIMINANT ANALYSIS OF HEALTHY AND DIABETIC CADETS**

**By**

**NJOKU, ROMANUS CHUKWUEMEKA**

**NPA/3/08/0104**

**A PROJECT SUBMITTED TO THE DEPARTMENT OF MATHEMATICS, FACULTY OF SCIENCE IN PARTIAL FULFILMENT OF REQUIREMENTS FOR THE AWARD OF BACHELOR OF SCIENCE (B.SC.) DEGREE IN MATHEMATICS NIGERIA POLICE ACADEMY, WUDIL, KANO**

**OCTOBER, 2017.**

**CERTIFICATION PAGE**

This certifies that this thesis has been read and approved as meeting the requirements of the Department for the award of the **degree in view**.

1. Certification - Capital- Font 14
2. Text should be block - Font 12 - Times New Roman

**See Sample C**

**Sample C (Certification Page)**

This is to certify that this project has been read and approved as meeting the requirements of the Department of Computer Science and Mathematics, Nigeria Police Academy, Wudil, Kano, Nigeria for the Award of Bachelor of Science degree in Mathematics (Computer Science).

**Dr. O.T. Olorunpomi Date**

**(Supervisor)**

**Mr. R.S. Ajayi Date**

**(Head of Department)**

**(External Examiner) Date**

**DEDICATION PAGE**

The author may wish to dedicate the work to an individual who must have endeared himself or herself to the author.

**See Sample D**

Dedication - Font 14, Capital, Centralized

This research work is dedicated to my parents - Font 12 - Sentence Case

**SAMPLE D (Dedication Page)**

This research work is dedicated to my parents.

**ACKNOWLEDGEMENTS**

The student may wish to express gratitude for the assistance and encouragements received in the course of the investigation. Acknowledgement should be made in the following order: God Almighty, Supervisor(s), other staff of the department, Parents, Colleagues, Typist, etc. Suggestions and assistance come in different forms ranging from technical, financial and editorial to moral. It may be directed to individuals, corporate bodies, organizations and companies. The depth of expression is also indicative of the level of support, assistance or encouragement received by the student. The student should, however, avoid ascribing the success and/or the findings of the investigation to those recognized in this section. The credit for the findings and the successful completion (or otherwise) of the study should be ascribed to the author.

Acknowledgements, to be presented in block paragraphing should not be more than two pages.

**ABSTRACT**

Abstract is expected to contain 5 paragraphs in block paragraphing with the following:

* Statement of the problem and objectives
* Objectives (list) in prose
* methodology
* findings - itemized in roman numerals
* conclusion and recommendation

This is a summary of summary. It is a digest of the entire thesis that should be given the same careful attention as the thesis. Abstract should **not exceed 500 words**, single spacing and block paragraphing. Abstract should be translated where necessary.

Sample E (Abstract)

Biserial correlation analysis was conducted on the blood sugar content and recoded binary variable for 51 cadets in Nigeria Police Academy, Kano; in order to measures the strength of relationship between the variables. We dichotomized the blood sugar content into “normal” and “diabetic” categories, while the recoded binary variable was dichotomized into “0” and “1”. The proportion of the normal blood sugar content was seen to be 0.627, while the proportion of the high blood sugar content is found to be 0.373. The mean of normal blood sugar content of X individuals in category 0 on Y was observed to be 5.291, while the mean of high blood sugar content of X individuals in category 1 on Y was observed to be 11.947. The height of the ordinate of the standard normal distribution at the point of division between the proportions p and q of the curve was computed to be 0.378. The biserial correlation coefficient of 1.010 suggested a positive correlation between normal and high blood sugar content. The z-score of 5.638 suggested that the biserial correlation coefficient is statistically significant and hence, different from zero.

**Table of Contents**

The table of content is an index page (or pages) listing the major headings and the subheadings and giving the beginning page number only for each listing. The heading and subheading wordings in the table of contents must be **exactly** as they appear in the body of the thesis.

**List of Tables**

Tables enable the student to organize his data in logical classification and hence, presented in more precise and concise manner than could be done otherwise. The list of tables comes immediately after the table of contents. It is a standard format for listing tables in the thesis, particularly where the thesis contains more than three tables.

The list of tables gives the title of each table in the order and with the wordings in which they appear in the body of the thesis and the page number where the table first appears (a table may be continued on two or more pages).

**Table Structure**

In the preparation of a table, the following rules should be observed:

1. a table should be constructed such that it could be read and understood without necessarily referring to the text of the thesis;
2. a table should be placed as close as possible to the page for the text dealing with it; if it runs into the next page
3. a table should be presented on a **separate page** from the text dealing with it.
4. tables that bear no immediate relevance to the discussion within the text are preferred in the appendix; and
5. tables presented in the appendix should essentially be constructed as those presented within the text.

There are, essentially, five parts to a table. These are:

* table number; i.e for tables in Chapter1 - Table 1.1; 1.2; 1.3
* table title; - initial caps and bolded.
* table heading; - initial caps and bolded.
* body of the table; and
* table footnotes.

**Table Title**

Each table in the thesis must have a distinct title. It may also have a subtitle where this is imperative. The title must reflect the content of the table. The conciseness of the title should not be at the expense of its clarity.

Table titles should be written with initial letter capitalized and bolded and should begin immediately after the table number at the left-hand justified margin of the table.

The table number must be placed on the same line as the table title and reference is made to the table by the table number. The first letter of the word “table” is capitalized and the numbering of the table is in Arabic numerals. Separate table number from table title with a colon.

**Table Heading**

The table heading, usually enclosed in horizontal lines immediately following the table title, consists of column headings and row headings for the body of the table. Vertical lines between column headings of the table must be avoided. Headings are written with initial caps of the principal word capitalized. Abbreviations are permitted in table headings.

**Body of the Table**

This section consists of the data to be presented usually in numerical form. The column entries are sufficiently separated to make for readability of the table. Should totals be given at the bottom of a table, each total is usually enclosed in ruled lines (one above the total and the other below it).

For a short table, entries may be double spaced but this should be reduced to single spacing where entries are large.

**Table Footnotes**

Occasionally, data contained in a table have been obtained from other investigations. The source of such data is then shown in a footnote immediately below the table starting from the left hand margin. Also, there are occasions when table headings and subheadings require further explanation. These additional definitions or explanations are given in footnotes and are referred to by such standard symbols as asterisks (\*) or (+, ++) or lower case letters. They appear in half- space Higher than the particular entry.

If a table from another report is incorporated in the text, the source of such table must be given in a footnote as “Source:………………………”

**Example of List of Tables**

**LIST OF TABLES**

**Page**

Table 1.1 Physical Characters of Shea Butter Fruit 10

Table 1.2 Chemical Analysis of Selected Vegetable Oils and Fats 15

Table 1.3 Levels and Factors in the 22 Factorial Design 22

Table 2.1 Standard order of Factor-Level Combination for a

22 Factorial Level Combination for a 22 Factorial Experiment 37

**This should be listed in line with Chapters.**

**List of Figures**

If more than 3 figures have been presented in the thesis, then a list of figures should be prepared following the page(s) for the lists of tables. As in the case for the list of tables, the exact titles as appeared in the text should be given in the list of figures, each listed against the page number where it appears in the text.

**Figure Structure**

Figures include graphs, charts, drawings, photographs, maps and schematic diagrams. In the text, figure title should appear below the illustration and referred to by figure number usually in Arabic (rather than Roman) numeral. The caption for each illustration should be in initial cap for principal words.

In the case of graphs, all labels should also be in initial caps. It is now unconventional to use “plates” to refer to illustrations even when such illustrations are photographs. Figures should be used.

Each illustration should be placed close to the text in which it is discussed. It is also customary and quite conventional to present data by means of graphs.

**Structure of the Main Body of the Project**

The content in the structure of the presentation may vary from one subject matter and discipline to another. However, the structure is expected to be in the following order;

**1.1 Introduction**

The introduction clearly outlines the general nature of the investigation, previous investigations by other researchers and the extent of investigation being proposed.

**2.0 Literature Review**

**2.1 Introduction**

Review of literature is expected to provide a good background for planning the investigation and is aimed at preventing duplication or repetition of previous research work. It will also help the student in his search for techniques and procedures for the conduct of the investigation. The review of literature is expected to take the form of critical appraisal.

**Note:** (i) 30% of long-standing literatures (2000 to 2010) and 70% of current literatures (2011 to 2018) are expected in the literature.

(ii) the literatures are appraised in ascending order to the most current year.

For example:

* Bayraci, et al. (2011) developed a vector autoregressive (VAR) model of the Turkish financial markets for the period of June 15, 2006-June 15, 2010 and forecasts ISE100 index, TRY/USD exchange rate, and short-term interest rates.
* Taiwo, et al. (2013) showed that correlation and regression are the traditional approach of determining relationship between two or more variables…
* To identify the monetary policy indicator that better explains the Sri Lankan monetary policy transmission mechanism and also, to estimate how shocks stemming from foreign monetary policy and or oil price affects domestic macroeconomic variables; Vinayagathasan, (2013) used a seven variable structural VAR model by utilizing monthly time series data from Sri Lanka covering the period from January 1978-December 2011.
* Bashir, et al. (2015) investigated the export-led growth hypothesis in Pakistan by applying unit root test, cointegration, vector error model and Granger causality tests using time series data of the selected variables (Real GDP, capital, employed labor force, exports, consumer price index and terms of trade) for the period of 1972-2012 for the analysis…

**3.0 Methodology / System Analysis and Design**

This chapter is expected to present the procedures and instruments employed in the conduct of the research. This may vary from discipline to discipline.

**3.1 Introduction**

**4.0 Data Analysis, Results and Discussion / System Implementation and Testing**

Results may be presented in tabular data, graphical and pictorial forms supported by simple, clear and concise descriptive statements. Lengthy tabular material should be included in the appendix rather than forming the main part of the thesis. Discussion should be in line with the stated objectives and probable reasons should be adduced for results obtained. Theoretical implication and practical application of the findings should be stated and compared with previously related works.

**4.1 Introduction**

**5.0 Summary, Conclusion and Recommendations**

**5.1 Summary**

It should be concise and sufficiently complete to anyone not desiring to read the remainder of the thesis/documentation. The language used in this section should be less technical but more descriptive so that the reader is able to freely determine what the problem was and what has been achieved without the necessary perusal of the whole thesis.

**5.2 Conclusion**

The conclusions section should draw the reader’s attention to the salient aspects of the study and its achievements by drawing. The statements must be guided by the results obtained from the investigation rather than by personal opinions which cannot be substantiated by facts.

**5.3 Recommendations**

Recommendation should be in tandem with the findings of its study and presented in an itemized format in Roman numerals. It can be written as the “suggestions for future research direction”.

Since most research work reveals more problems than they solve, a list of suggestions and/or theories for future research work should be included. These are logical inferences from the study which would be valuable for other future researchers who may wish to carry on with this or similar aspect of the investigation.

**REFERENCES**

References are arranged alphabetically irrespective of whether it is a journal or a book.

**(a) Journal References**

1. Only the first letter of an article in a journal shall be in capital expect it in a proper noun and botanical names (sentence case)
2. The title must be end with a full stop/period/dot.
3. The name of the journal should appear in italics and in sentence case which shall end with a comma.
4. In presenting, volume and issue number, for example volume 15 issue no 3 should be written as 15(3) and end with a comma. This is followed with the running page number for example: Nigerian Journal of Bio chemistry and Molecular Biology, 5(3), 111-115.

E.g. Antoniou, E.N. and S. Vologiannidis (2006). Linearizations of Polynomial Matrices with Symmetries and their Applications. “*Electron Journal of Linear Algebra”* 15, 107–114.

Bashir, F., Iqbal, M. M. and I. Nasim (2015). Exports-Led Growth Hypothesis: The Econometric Evidence from Pakistan. “*Canadian Social Science”*, 11(7), 86-95.

Higham, N.J., Mackey, D.S. and F. Tisseur (2006). The Conditioning of Linearizations of Matrix Polynomials. “*Society for Industrial and Applied Mathematics Journal on Matrix Analysis and Applications”,* 28, 1005–1028.

Johansen, S. (1988). Statistical Analysis of Cointegrated Vectors. “*Journal of Economic Dynamics and Controls*” 12, 231-254.

Levin, A., Lin, F. and Chu, C. (2002). “Unit Root Tests in Panel Data: Asymptotic and Finite‐Sample Properties.“*Journal of Econometrics”* 108, 1–24.

5. To reference an author or authors in the main body of the project:

(i) Single author: the surname of the author followed by the year of publication, i.e., Olorunpomi, (2016), Johansen, (1988) or if the reference is made after the statement, it must be in a bracket as: (Olorunpomi, 2016, Johansen, 1988).

(ii) Two authors: the surname of the authors followed by the year. E.g. Olorunpomi and Johansen (1988)

(iii) More than two authors: First author followed by et.al, the year of publication of the book or journal should be used as reference in the main body of the project; i.e., Levin, et al. (2002) should be used in the case

**(b) Book References**

1. The name of the book should be written in italics and in sentence case which shall end with a period.
2. The edition statement shall be written in figure and letters in superscript 2nd, 3rd 12th, the abbreviation for the word edition should be Ed.
3. For edited work, the word edition(s) shall be written as Edt.
4. Where there is more than one publication town, the most popular of the listed should be picked.
5. Comma should be used to distinguish between the published and place of publication with a comma e.g. Macmillan, Lagos,
6. Where there are more than 3 authors:

**a.** the name of the first author followed by et.al, the year of publication of the book or journal should be used as reference in the main body of the project.

E.g. (i) Carter, 1989 for a single author;

(ii) Box and Jenkins (1994) for two authors; and

**b.** However, the full names of all the authors should be in the reference text.

E.g. (i) Box, G.E.P., and G.M Jenkins (1994). “*Time Series Analysis: Forecasting and Control”*. 3rd Ed. Prentice Hall, New Jersey.

(ii) Carter, H. R. (1989).”*Introduction to the Theory and Practice of Econometrics”*. 2nd Ed. John Wiley & Sons, Inc. New York, United States of America.

1. Conference papers and proceedings

Name and year of conference. Title of the paper which will be written normally. The title of the conference (Normal Avenue and dates) For proceeding, title of the proceeding of the conference which will be italicized will come after the title of the paper. Volume or issue number, running page numbers.

E.g. (i) Best, A. and B.M. Francis (2015). Is Financial Development Supply-leading or demand-following? Time-series Evidence from Barbados the Caribbean Centre for Money and Finance. *47th Annual Monetary Studies Conference*, 1-31.

**(c) Newspaper References**

1. Author, (year, day month) title of article (written normally) the name of the newspaper should be italicized which will end with a comma and the page number of the newspaper without p as it is written in the newspaper, single page number.
2. Treat a weekly newspaper as a magazine

**Magazine Referencing**

1. Author, year, Month, title of article in normal title case. Name of magazine in italics, series no or volume no. Thereafter paper, this could be running.

APPENDIX / APPENDICES

Appendix A, Example of Thesis Title Page.

**Example of Table of Contents**

**TABLE OF CONTENTS Page**

COVER PAGE……………………………………………………………………………………

TITLE PAGE……………………………………………………………………………………..

CERTIFICATION....……………………………………………………….................................

DEDICATION.............…………………………………………………………………..............

ACKNOWLEDGEMENTS………………………………………………………………………

ABSTRACT………………………………………………………………………………………

TABLE OF CONTENTS…………………………………………………………………………

LIST OF TABLES………………………………………………………………………………..

LIST OF FIGURES……………………………………………………………………………….

**CHAPTER ONE: INTRODUCTION**

1.1 Introduction

1.2 Background to the Study.......…………………………………………………………….

1.3 Statement of the Problem………………………………………………………...............

1.4 Aim and Objectives of the Study …………………………...............................................

1.5 Research Question (if applicable) CMP: 1.5 Project Methodology

1.6 Research Hypotheses (if any) CMP: 1.6 Significance of the Study

1.7 Scope and Limitation of the Study CMP. 1.8 Project Outline / Structure

1.8 Significance of the Study

1.9 Definition of Terms……………………………….......................................

**CHAPTER TWO: LITERATURE REVIEW**

2.1 Introduction…………………………………..............……………...................................

2.2 The sub-title here depends of individual research………..………………………

2.3 The sub-title here depends of individual research; and so on…….................................

**CHAPTER THREE: METHODOLOGY CMP: SYSTEM ANALYSIS AND DESIGN**

3.1 Introduction…………………………………………………….........................................

3.2 Research Design……………………………………………………………......................

3.3 Population Sample and Sampling Procedure……………………………………………...

3.4 Instrument of Data Collection...…………………………………………………………..

3.5 Procedure for Data Collection.............................................................................................

3.6 Data Analysis Method.........................................................................……………………

**CHAPTER FOUR: DATA ANALYSIS, RESULTS AND DISCUSSION**

**CMP: SYSTEM IMPLEMENTATION AND TESTING**

4.1 Introduction.................…………………………………………………………..................

4.2. Data Analysis..........................................................................................…………………..

4.3 Results...................................................................................................................................

**CHAPTER FIVE: SUMMARY, CONCLUSION AND RECOMMENDATIONS**

5.1 Introduction ……………………………………………........................………………..…

5.2 Summary...............................................................................................................................

5.3 Conclusion............................................................................................................................

5.4 Recommendations.................................................................................................................

REFERENCES

APPENDIX

**Note: (i) Dotted lines are not expected to appear physically on the project;**

**(ii) Each chapter starts from a new page; and**

**(iii) the CMP titles are peculiar to computer cadets only.**