

# **Project Template for Computer Science Department Students**

## **of Takoradi Technical University**

In order to standardize the dissertation style and template in the University, the following requirements are essential for writing dissertations, according to the format for writing scientific and technical reports.

### **Basic Requirements for Dissertation**

A dissertation must be a systematic and complete academic paper, which is an independent research achievement made by a degree applicant himself under the guidance of a supervisor. The paper must not copy and plagiarize the results of others. The academic viewpoints of dissertations must be clear with rigorous reasoning, reliable data, concise texts, and thorough explanation.

### **Word Count**

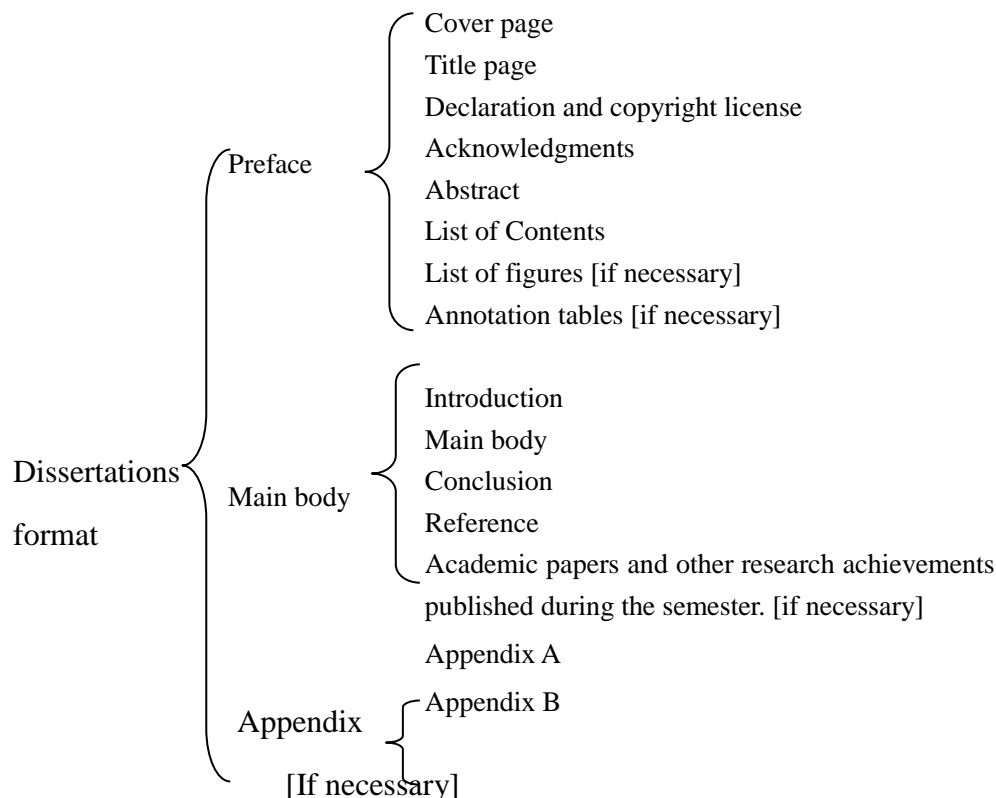
1. Diploma Dissertation/Project: The number of words in the master's degree paper is generally 15,000-25,000 words (around 50 pages)
2. HND Dissertation/Project: The number of words in the master's degree paper is generally 15,000-25,000 words (around 50 pages)
3. Bachelor's Dissertation/Project: The number of words in the master's degree paper is generally 18,000-27,000 words (around 60 pages)
4. Master's Dissertation/Thesis: The number of words in the master's degree paper is generally 20,000-30,000 words (around 80 pages)
5. Doctoral Dissertation: The word count is within 30,000-50,000 words (above 100 pages).

The terms, symbols and codes used in dissertations must be unified and conform to the requirements.

### **Dissertation Structure Outline**

Dissertations must consist of three parts: the preface, the main body of the dissertation, and the

appendix (the format of dissertation is shown in Figure 1).



**Figure 1:** Dissertations format

## **1. Prefix of the Degree dissertation**

It includes the cover page, title page, declaration and copyright license, abstract, table of contents, list of figures and list of tables.

### **1.1 Cover Page**

The cover page must display the cover of the degree dissertations issued by the school.

### **1.2 Title Page**

1. The contents of the title page include: the title of the paper, major, the status of your degree the name of the author, the name and title of the Supervisor, the date of submission of the paper, date of the dissertation defense, the degree awarding unit and date, etc.
2. Formatting: The title can be divided into 1~3 lines with upper case letters, and at least space of five characters must be left on both sides of each line.

### 1.3 Declaration and copyright license

The format of the original statement and the copyright authorization form is attached to the annexure. Postgraduate students and their supervisor need to sign according to the regulations.

### 1.4 Acknowledgments

The acknowledgment should comprise of organizations or individuals who have funded the work of a degree paper; or who guided and assisted the work of the dissertations; information, pictures, documents, ideas for the reference are given.

### 1.5 Abstract

The abstract must be a brief explanation of your dissertation. It must include the aim, methods, results and conclusions of your research work. In order to facilitate the retrieval of literature, a line below the abstract must contain 3~8 key words, which must be separated by commas.

Example of keywords

Keywords: expert system, fuzzy mathematics, mechanical design, knowledge science

Abstract should not include formulas. The number of words in the dissertation is between 800~1000 words.

### 1.6 List of contents

The list of contents is the outline of the dissertation, and the subheadings of each part of the paper must be labeled. Titles at all levels of your dissertation must be labeled in format 1, 1.1 and 1.1.1 respectively.

### 1.7 List of figures

If there are more figures, you can list them separately after the directory page. The list should have a serial number, a title, and a page number.

### 1.8 Annotation table

The annotation table is an explanatory note for symbols, acronyms, abbreviations, units of measurement, nouns, and terminology.

## **2. Main body of the dissertation**

### **2.1 Introduction**

The introduction must contain a brief description of the aim, scope, previous work and knowledge gaps in the related fields, theoretical basis and analysis, research ideas, research methods, experimental design, expected results and significance of your dissertation. The content of introduction should not be similar to the abstract.

### **2.2 Main body**

The text is the core part of dissertation. It must be objective, real, accurate, complete, logical, concise and readable. The sequence of the chapters and sections of the text is generally composed of five parts: title, main contents, diagrams, tables and formulas. The form of writing can vary according to the nature of the scientific research project. It can generally include theoretical analysis, calculation method, analysis and discussion of the experimental results, the comparison between the theoretical calculation results and the existing research method.

An example of a chapter and section

Chapter: **8** Variance control design

Section: **8.1** Description of the problem

#### **2.2.1 Figures and Tables**

##### **(1) Figures**

The figure should have a labeled number and a necessary explanation. Each figure should be self-explanatory, that is, you can understand the meaning of a figure only by looking at the pictures and drawing without reading the text.

The labeled number is composed of two parts, numbers on both sides separated by the “.”, the first number is the number of the chapter, and the latter number indicates the number of figure in the chapter. For example, "graph 4.3", it represents fourth chapter and third diagram.

The content of the figure must be labeled with font “TIMES NEW ROMAN” size 11 and must be

centered

The longitudinal and transverse coordinates of the graph must be marked. The symbols and abbreviations specified in the coordinates must be consistent with the text.

Graphical abstract and figures must be clear. If any enlarged and replicated copy is used, it must have a clear contrast.

Figures must be neat, clear, standardized, and the figures of mechanical parts should clearly reflect the contents of the figures according to the specifications of mechanical drawing.

## (2) Tables

The table should have table numbers, table description and should be self explanatory. The arrangement of the table is arranged according to the content (or test item) from the left to right horizontal rows and the data is arranged in a sequence. The columns of the table should be marked with the symbols of the dimension, unit or standard, which can be omitted only under necessary circumstances. It is not appropriate to use the words "ibid", "left", "d" or similar words and symbols in the table. The blank in the table must be labeled "no" or "unmeasured".

The table number is written in the same way as the figure, for example, "table 2.6", which represents second chapter and sixth table.

Labeled content of the table must be centered.

If a table needs to be continued to a page, the table number should be repeated on the subsequent pages, followed by table numbers (omitted) or "(Continued)", as shown in Table 1.2 (Continued).

The repeating table should be arranged.

If you need to annotate graphs and tables, use "(Note: ...)". (Times new roman size 11) to indicate that it is placed below.

### 2.2.2 Formulas

The formula should be written in another line, the longer formula should be returned at the same sign, or at the sign of "+" and "-". The horizontal line length of the fractional line should be distinguished from the formula, and the main horizontal line should be leveled with the equal sign. The formula should be marked with an ordinal number. The serial number is arranged in the order of the chapter. It is enclosed in brackets and written at the end of the line on the right. There is no dashed line. No other symbols such as "\*" should be used to mark the ordinal number of the formula.

Example:

$$I = \frac{V}{R} \quad (2.3)$$

use the word “formula “when referring the formula in the text (2.3)”

### 2.3 Conclusion

The conclusion must be the final and general outline of dissertations. It should be concise, accurate and complete. It must explain the creative achievements of the author and significance of research in this field. Also further questions and suggestions must be discussed in this section.

### 2.4 Reference

The dissertation should be based on a rigorous and realistic scientific evidence. The references of others must be marked in order in the content of dissertation.

For in-text citations, where the authors are more than three, the 1<sup>st</sup> three authors can be cited plus the words “et al.”. Where the authors are less than four they should all be listed. The cataloguing of references should be complete, and should be in line with the "bibliographic reference of APA (APA style of referencing). Several main reference cataloguing forms are as follows:

- Serial publications: [serial number] author. Question title. Year, volume number (period number): from page to page.
- Translations: [serial number] author. Title: Translator: publisher, publication year: stop page number.
- The Anthology: [serial number] author. Topic. Editor, anthology, publication: publisher, publication year: stop page number.
- Dissertations: [serial number] name. Article [\* \* dissertation]. Granting the location of the unit: granting the unit to grant the year.
- Patent: [serial number] applicant. Patent name, country name, patent literature type, patent number, date of publication.
- Technical standard: [serial number] issuing unit, technical standard code, technical standard name, publication place: publisher, publication date.

### 2.5 List of Academic papers and other research achievements published during the study.

Only published academic papers must be included in the content. Other research achievements include scientific research award, patent application, publication monographs and scientific research projects.

### **3. An appendix to a dissertation**

Appendix is not a supplementary part as the main body of dissertation. It mainly includes:

- (1) The lengthy derivation of formula in the text
- (2) Supplementary mathematical tools or repetitive charts and tables for others to read conveniently.
- (3) A list of computer programs that are too long to be presented in the text.

The sequence number of the appendix must be arranged in Appendix A, Appendix B.

The arrangement, the order in the appendix (for example appendix B) can be arranged according to the rules of B.1, B.1.1, and B.1.1.1, and the charts and figures in main body are arranged according to the regular arrangement of figure B1, figure B2, table B1, and table B2.

The appendix can be separately bound, and the page number is separately arranged. The title, author and other contents of the original are required to be specified on the cover. If the appendix is included with the original content of the paper, the page number must be continuously arranged with the text.

### **The font, printing and binding requirements of Dissertations**

#### **1. The font of a dissertation**

1. **Size:** Title: Size 16 & Bold,
2. Chapter headlines: Size 14,
3. and third level headlines: Size 12,
4. the content of the dissertation: Size 12.
5. **Font:** Times New Roman
6. **Line spacing:** 1.5

#### **2. Layout of Dissertations**

The dissertations must consist of the title page, the original statement of the paper, declaration of the copyright use, the abstract, the list of catalogues, the list of charts (if necessary), the annotated

table (if necessary), the introduction, the text, the conclusions, the reference literature, the acknowledgement, and the publications during the study. The academic papers and other scientific research achievements and appendixes must be sequenced (when necessary). The abstract page to the annotated table page is continuously numbered with uppercase Roman numerals; the introduction (or introduction) page to the appendix page is continuously numbered with Arabic numerals. The page number must be centered at the bottom of page.

The page header of the paper begins with the abstract, using size 10.5. The page header of Odd pages can be marked "Takoradi Technical University (Diploma, HND, Bachelor, Master or PHD) degree dissertation/Thesis/Project", and also can include the divisions of the dissertation.

### 3. Printing and binding requirements

The dissertation must be printed on A4 (210 \* 297mm) paper page layout. dissertation must be printed on both sides of the paper. 25mm must be left at the top and left side of the page, 20mm must be left at the bottom and right side of the page with the university university's logo printed on the cover of the book.

**THE ABOVE ARE THE FORMAT REQUIREMENTS OF DISSERTATION ISSUED BY THE COMPUTER SCIENCE DEPARTMENT OF TAKORADI TECHNICAL UNIVERSITY.**



Enclosure:

### **Declaration of Authorship**

I solemnly declare that the dissertation submitted is the result of my independent research work under the guidance of my supervisor. In addition to the content cited in the article, this article does not contain any of the works published or written by any other individual or group, nor does it contain materials used to obtain degrees or certificates from the Takoradi Technical University or other educational institutions. The individuals that have made important contributions to this study have been clearly identified in the text. I am fully aware that I am obligated to undertake the legal consequence of the statement.

Name of Candidate: .....

Signature: .....

Date: .....