**Arrangement of the Thesis**

Each thesis must be arranged in the following order. The detail about each section is given on following pages.

* Title Page
* Dedication Page
* Certification of Approval
* Acknowledgement
* Table of Contents
* List of Abbreviations
* List of Figures
* List of Photographs
* List of Tables
* Abstract
* Chapter 1 – Introduction
* Chapter 2 – Literature Review
* Chapter 3 – Research Methodology / Experimental Work
* Chapter x - ……………….
* Chapter x – Conclusions and Recommendations
* References
* Appendices

**1. ARRANGEMENT OF THE THESIS**

The thesis should be divided into three sections:

|  |  |
| --- | --- |
| Sections 1 | Preliminary pages must be placed before the text. These pages contain title page, dedication page, certification of approval of thesis by examination committee, Author’s declaration, plagiarism undertaking by the scholar, copyright page, acknowledgement page, table of contents, list of abbreviations, list of figures, list of notations, list of photographs, list of tables and abstract. |
| Sections 2 | Main body (text) of the thesis consisting of various chapters, sections and sub-sections, including the chapter of conclusions and recommendations and References. |
| Sections 3 | Appendices must be placed after the text. |
| The details of the sections along with formatting is discussed in later sections.  |

**2. SIZE AND QUALITY OF PAPER**

The thesis should be prepared on standard A4 size (210 mm x 297 mm) good quality white paper (at least 80 gm). The same paper should also be used for Figures, Tables and Charts etc. and for mounting Photographs (if any).

**3. SPELLINGS**

Either the American or British English spellings should be used throughout the thesis.

**4*.* TYPING AND PRINTING**

1. The entire thesis must be computer-typed and printed through laser printer with black ink on plain paper without any borderlines, logos, insignia, monograms etc.
2. The main text of the thesis must be typed 1.5 spaced with font Times New Roman, size 12, unless specified otherwise, or any other font and */* or size as approved.
3. Each chapter must start on a new page and be typed continuously with sections and sub-sections on successive pages.
4. The chapter number and heading should be typed centered on the page in bold capitals and underlined with font size 14. The chapter heading should be placed below the chapter number. The chapter number should be in Arabic numerals, e.g.,

CHAPTER 2

LITERATURE REVIEW AND RESEARCH FRAMEWORK

1. The section number and heading must be typed from the left margin in capitals bold letters without underlining. The section number must consistof the chapter number followed by a number, both in Arabic numerals, e.g.,

**2.1 RESEARCH GAP**

1. The sub-section numbers and headings must be typed from the left margin in bold lower case characters with the first character of the first word in capital withoutunderlining. The sub-section must consist of the chapter number followed by section number and one additional number representing the subsection, all in Arabic numerals, e.g.,

**2.1.1 Research Objectives**

1. Any further sub-section numbering, if needed, must be done with additional Arabic numerals without bold letters, e.g.,

2.1.1.1 Research Sub-objectives

**5. MARGINS**

Margins of 1½ inch must be left at the top and left side, and 1 inch on the right side and bottom of the paper.

**6. TABLES**

1. Each table must be typed following the place where it is referred first, preferably on the same page, or if it cannot be accommodated in the remaining space on the same page then on the following page, with single or one and a half spacing as is found convenient to accommodate the table on one page within the specified margins.
2. A long table which cannot be accommodated on one page, even with single line spacing and/or reduced to an easily legible size, may be continued on the next page under the same table number with proper indication at the bottom of the page, e.g., "continued on the next page".
3. The heading of the table must be in bold lower case letters with the first character of the first word in capital without underlining. The number and heading of the table should be typed above the table itself.
4. All the tables belonging to each chapter must be numbered in the same way as the sections of the chapter, the first number indicating the chapter number and the second the table number in sequence, both in Arabic numerals, e.g.,

**Table 4.1: Comparison of theoretical and experimental results**

1. If any table is referred on a page other than that where it is placed, it should be referred with its number and the page where it is placed, e.g., Table 4.1 on p. 36.
	1. **FIGURES**
2. Each figure must be drawn and placed within the specified margins following the place where it is referred first, preferably on the same page, or if it cannot be accommodated in the remaining space on the same page then on the following page.
3. The number and caption of each figure should be typed under it with bold letters in the same way as the headings of tables described above, e.g.,

**Fig 4.1: Scatter Plot**

1. If any figure is referred on a page other than that where it is placed, it should be referred with its number and the page where it is placed, e.g., Fig. 4.1 on p.43.
2. **PHOTOGRAPHS**
3. Each photograph, colored or black and white, must be placed within the specified margins following the place where it is referred first, preferably on the same page, or if it cannot be accommodated in the remaining space on the same page then on the following page.
4. The number and caption of each photograph should be typed under it with bold letters in the same way as for figures, e.g.,

**Photograph 4.1: Technology Adoption Model**

1. If any photograph is referred on a page other than that where it is placed, it should be referred with its number and the page where it is placed, e.g. Photograph 4.1 on p.54.
2. **LARGE SIZE DRAWINGS, CHARTS, FIGURES, AND TABLES**

Any drawing, chart, figure or table, which cannot be accommodated with clarity on the normal size of the thesis page, even with easily legible reduced size, may be prepared on a larger size paper / sheet, which should be folded and enclosed in a special pocket attached permanently inside of the bound back of the thesis.

1. **EQUATIONS**

All equations belonging to a chapter in the text should be numbered in the same way asthe figures and tables. Each equation should start on a separate line with a larger than the normal spacing between the equation and the text above and below it, e.g.,

|  |  |
| --- | --- |
| Ax+By=C |  (4.1) |
|  |  |

The equation should be referred to in the text as Eq. (4.1)

**11. PAGINATION OF TEXT**

The pages in the text should be numbered in Arabic numerals, consecutively, starting from the page where the first chapter begins. The starting page of each chapter should have the page number printed centrally at bottom of the page. All the other pages should have page numbers typed at the top right corner.

1. **PRELIMINARY PAGES**

The following pages are to be placed in the order given below before the text of the thesis. These pages should be numbered in lower Roman numerals, consecutively, starting (i) form the title page and the numbers should be placed centrally at bottom of each page.

|  |  |  |
| --- | --- | --- |
| **i.** | **Title Page** |  |
|  |
|  |  |

The title page should present the MUET logo, thesis title (Times New Roman - 20), students name (Times New Roman - 16), the statement "Thesis submitted to MUET for the degree of" (Times New Roman - 14), field of study (Times New Roman - 14), department / institute (Times New Roman - 14), faculty (Times New Roman - 14) and the month and year of approval (Times New Roman - 14). A specimen of the title page is given in Appendix 1.

 **ii. Dedication Page**

If a candidate desires to dedicate his / her thesis to any person or organization, it should be so stated on this page with heading (Times New Roman - 18) and text (Times New Roman - 12). A specimen of this page is given in Appendix 2.

1. **Certificate of Approval of thesis by examination committee**

A certificate signed by the thesis internal and external examiners, including the candidate and his/her Supervisor and co-supervisor, Director of the concerned Instituteand Dean of-the concerned Faculty, indicating the approval of the thesis, should be put on this page with heading (Times New Roman - 18) and text (Times New Roman - 12). A specimen of the certificate page is given in Appendix 3.

1. **Author’s Declaration**

A brief declaration with a candidate name on it stating that the PhD thesis is his/her own work and not submitted anywhere else should be given on this page with heading (Times New Roman - 18) and text (Times New Roman - 12). A specimen of the certificate page is given in Appendix4.

1. **Plagiarism undertaking by the Scholar**

An undertaking by student in lines of zero tolerance policy of HEC of plagiarism signed by scholar should be given on this page with heading (Times New Roman - 18) and text (Times New Roman - 12). A specimen of the certificate page is given in Appendix 5.

1. **Copyright Page**

According to the MUET IP Policy, university possesses 100% copyright of the thesis conducted by PhD scholars. A copyright must be mentioned given on this page (Times New Roman – 28). A specimen of the page is given in Appendix 6.

1. **Acknowledgement**

A brief acknowledgement, in just one page, only to those persons and organizations who have assisted the candidate in his/her thesis work, or provided relevant data/ information/laboratory or research facility and tools etc. should be given on this page with heading (Times New Roman - 18) and text (Times New Roman - 12). A specimen of the page is given in Appendix 7.

1. **Table of Contents**

It should contain the numbers and headings of all the preliminary pages following the Table of Contents, chapters, sections and subsections of the text, including references and appendices, described consecutively, and should indicate the page where the item starts. It should be typed with single line spacing, and with the same font and size of both the capital and lower case characters / letters as followed in the text of the thesis. A specimen of the page is given in Appendix 8.

1. **List of Abbreviations**

This list should contain all the abbreviations used in the thesis and should be typed with single line spacing. The abbreviations must be listed in the alphabetical order with heading (Times New Roman - 18) and text (Times New Roman - 12). A specimen of the page is given in Appendix 9.

1. **List of Figures**

The number and caption of each figure, including the page number where it is located in the text, should be provided, consecutively and chapter-wise, in this list and should be typed with single line spacing.

1. **List of Notations**

All standard notations in English or Greek characters appearing frequently in the text should be described in the list of notations in alphabetical order with the notations in capitals preceding those in lower case characters. All other notations appearing only once in the text need not be given in this list but should be defined at the place where they appear in the text. This list should be typed with single line spacing. A specimen of the page is given in Appendix 10.

1. **List of Photographs**

The number and caption of each photograph, including the page number where it is located in the text, should be provided, consecutively and chapter-wise, in this list and should be typed with single line spacing.

1. **List of Tables**

The number and heading of each table, including the page number where it appears in the text, should be provided, consecutively and chapter-wise, in this list and should be typed with single line spacing.

1. **Abstract**

A brief summary of maximum of 350 words of the whole thesis should be given on this page with heading (Times New Roman - 18) and text (Times New Roman - 12). A detail about this page is given in Appendix 11.

1. **Appendices**

The number and title of each appendix including the page number where it is located should be provided, consecutively, in this list and should be typed with single line spacing.

1. **REFERENCES**

In order to avoid plagiarism and enable a reader to trace the source of knowledge, all the references quoted in the entire thesis must be placed at the end of the text in the Harvard style alphabetically. There are two parts to referencing using Harvard style: the reference list and citing the references in the text. The reference list appears at the end of the thesis document and citation is within the text.

The citation mentions the author’s surname and year of publication. The citation style varies depending upon the number of authors.

**For a single author** – Qureshi (2018)

**For two authors** – Bhutto and Qureshi (2018)

**For three authors** – Bhutto, Shah and Qureshi (2018)

**For four or more authors** – Baloch*et al.* (2018)

The reference list must have surname followed by initials of the authors. The year of publication, in round brackets, should follow the names. In the case of more than one publication of the same author(s) in one year, the year of publication should be followed by the letter 'a', 'b' and so on. The specimen of describing various types of publications from various types of sources are given in Appendix12.

1. **BINDING OF THE THESIS**

The thesis should be hard bound in dark blue color, as per specimen available with the Director, Post-Graduate Studies / Director of the concerned Institute / Chairman of the concerned Department. The title of the thesis, author's name, title of the degree, year of award of the degree and Mehran University of Engineering and Technology should be printed in gold letters on the front of the cover. The back of the cover should not have any thing printed on it. The author's name, title of the degree and year of award should be printed in gold letters on the bound edge. Appendix 13 shows the specimen of these writings.

**TITLE OF THESIS**



By:

1. \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

2. \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

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Supervised by:

(Name of the Supervisor)

Department of Software Engineering

Mehran University of Engineering and Technology, Jamshoro

Submitted in partial fulfillment of the requirement for the degree

of Bachelor in Software Engineering.

2018

**Certificate of Approval**

This is to certify that the work presented in this thesis presented on \_\_\_\_\_\_\_\_\_\_ is entirely designed, developed and written by the following students themselves.

Names Roll No.

\_\_\_\_\_\_\_\_\_\_\_\_ \_\_\_\_\_\_\_

\_\_\_\_\_\_\_\_\_\_\_\_ \_\_\_\_\_\_\_

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 Supervisor Chairman

Dated:\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_