

GUIDELINES FOR  
PREPARATION OF THESIS  
FOR AWARD OF PhD DEGREE



BIKANER TECHNICAL UNIVERSITY, BIKANER  
2023

# Guidelines for preparation of Thesis

## Preamble

While utmost attention must be taken to the content of the thesis, which is being submitted in partial fulfillment of the requirements of the Ph.D. degree, it is imperative that a standard format be prescribed. The same format shall also be followed in preparation of the soft copy (word and pdf format in chapter wise and complete thesis form) which shall be submitted to the University Library. A candidate initially needs to submit five hard copies of the thesis in soft binding form for evaluation of the thesis, along with its soft copy (word and pdf format in chapter wise and complete thesis form) if research work was conducted under supervision of a single Supervisor.

## 1. Organization of the Thesis

This thesis shall be presented in a number of chapters, starting with Introduction and ending with Summary and Conclusions followed by Reference Section. Each of the other chapters will have a precise title reflecting the contents of the chapter. A chapter can be subdivided into *sections, subsections and subsubsection* so as to present the content discretely and with due emphasis. When the work comprises two or more mutually independent investigations, the thesis may be divided into two or more parts, each with an appropriate title. However, the numbering of chapters will be continuous right through, for example Part 1 may comprise Chapters 2 to 5, Part Two, Chapters 6 to 9.

### Introduction

The title of **Chapter 1** shall be Introduction. It shall justify highlighting the problem statement, hypothesis description, rationale of the study, identify define the topic and deduce the aim, subobjectives and scope of the work presented in the thesis. It may also highlight the significant contributions from the earlier investigations in the field chosen.

## **Review of Literature**

This shall normally form Chapter 2 and shall present a critical appraisal of the previous work published in the literature pertaining to the topic of the investigation. The extent and emphasis of the chapter shall depend on the nature of the investigation. The reporting on the investigation shall be presented in one or more chapters with appropriate chapter titles.

## **Materials and Methods**

This chapter shall present the materials used in the study both in physical (physical, Chemical, biological, animal and plants etc.) or in virtual (software, algorithms, statistical tools, case study reports) forms with source declaration. Due importance shall also be given to experimental setups, procedures adopted and the model used. All the methods shall be documented to plan the study, conducting the experiments, developed standard techniques adopted to conduct the studies.

While important derivations/formulae should normally be presented in the text of these chapters, extensive and long treatments, copious details and tedious information, detailed results in tabular and graphical forms may be presented in Appendices. Representative data in table and figures may, however, be included in appropriate chapters. Equations should form separate lines with appropriate paragraph separation above and below the equation line, with equation numbers flushed to the right.

## **Results and Discussions**

This shall form the penultimate chapter of the thesis and shall include a thorough evaluation of the investigation carried out and bring out the contributions from the study. The discussion shall logically lead to inferences and conclusions as well as scope for possible further future work.

Figures and tables should be presented immediately following their first mention in the text. Short tables and figures (say, less than half the writing area of the page) should be presented within the text, while large table and figures may be presented on separate pages. Summary/conclusion of each chapter may be provided at the end of the chapter.

## Summary and Conclusions

This will be the final chapter of the thesis. A brief report of the work carried out shall form the first part of the Chapter. Conclusions derived from the logical analysis presented in the Results and Discussions Chapter shall be presented and clearly enumerated, each point stated separately. Scope for future work should be stated lucidly in the last part of the chapter.

## Appendix

Detailed information, lengthy derivations, raw experimental observations etc. are to be presented in the separate appendices, which shall be numbered in Roman Capitals (e.g. “Appendix IV”). Since reference can be drawn to published/unpublished literature in the appendices, these should precede the Reference/ Bibliography section.

## References/ Bibliography

This should follow the Appendices, if any, otherwise the Summary and Conclusions chapter. The candidates shall follow the APA style of citation and style of listing in one of the standard journals in the subject area consistently throughout his/her thesis, for example as shown in Table below:

book	(Sapolsky, 2017)	Sapolsky, R. M. (2017). <i>Behave: The biology of humans at our best and worst</i> . Penguin Books., (4th ed., pp. 115–129).
Chapter in an <u>edited</u> book (If the chapter is from an authored book, <a href="#">use the book citation</a> )	(Dillard, 2020)	Dillard, J. P. (2020). Currents in the study of persuasion. In M. B. Oliver, A. A. Raney, & J. Bryant (Eds.), <i>Media effects: Advances in theory and research</i> (4th ed., pp. 115–129). Routledge.
An article in a print journal	(Weinstein, 2009)	Weinstein, J. (2009). The market in Plato’s Republic. <i>Classical Philology</i> , 104(4), 439-458.
An article in an electronic journal	(Grady et al., 2019)	Grady, J. S., Her, M., Moreno, G., Perez, C., and Yelinek, J. (2019). Emotions in storybooks: A comparison of storybooks that represent ethnic and racial groups in the United States. <i>Psychology of Popular Media Culture</i> , 8(3), 207–217. <a href="https://doi.org/10.1037/ppm0000185">https://doi.org/10.1037/ppm0000185</a>
A website	(Bologna, 2019)	Bologna, C. (2019). <i>Why some people with anxiety love watching horror movies</i> . HuffPost. <a href="https://www.huffpost.com/entry/anxiety-love-watching-horror-movies_1_5d277587e4b02a5a5d57b59e">https://www.huffpost.com/entry/anxiety-love-watching-horror-movies_1_5d277587e4b02a5a5d57b59e</a> (website visited on October 31, 2019).
Report/ Bulletins published by an organisation	(Anonymous, 2023)	Anonymous (2023). Guidelines for International Arrivals (in supersession of guidelines issued on the subject on 29th December 2022). Ministry of Health and Family Welfare, Government of India, February 10, 2023. <a href="https://www.mohfw.gov.in/pdf/GuidelinesforInternationalArrivals10thFebruary2023.pdf">https://www.mohfw.gov.in/pdf/GuidelinesforInternationalArrivals10thFebruary2023.pdf</a>

### **Publications by the candidate**

Articles, technical notes etc. on the topic of the thesis published and presented articles in conferences/seminar proceedings by the candidate must listed after the references/bibliography section. Entry of this section must also be included in the table of contents. Here the candidates should also include reprints of his/her publications to fulfill the requirements of PhD ordinance O.14.1.

### **Candidate's Profile**

Brief profile of the candidate may be given on the last page of thesis.

## **2 Thesis Format**

### **Paper**

#### **Quality**

The thesis shall be printed/xeroxed on both side of white bond paper, whiteness 95% or above, weight 90 gram or more per square meter.

#### **Size**

The size of the paper shall be standard A 4; height 297 mm, width 210 mm.

#### **Type Setting, Text Processing and Printing**

The text shall be printed employing laser printer, the text having been processed using a standard text processor. The standard font shall be Times New Roman of 12 pts with 1.5-line spacing.

#### **Page Format**

The Printed Sheets shall have the following written area and margins:

- Top Margin 30 mm
- Bottom Margin 22 mm
- Footer 3 mm
- Foot Separation 10 mm
- Text Height 245 mm
- Text Width 160 mm

#### **Left and Right Margins**

- Single sided/odd number page (in double sided printing)
  - Left Margin 30 mm

- Right Margin 20 mm
- Double sided even numbered page
  - Left Margin 20 mm
  - Right Margin 30 mm

### **Pagination**

Page numbering in the text of the thesis shall be Hindu-Arabic numerals at the center of the footer. But when the candidate opts for header style the page number shall appear at the right and left top corner for the odd and even number pages, respectively.

Page number “1” for the first page of the Introduction chapter shall not appear in print, only the second page will bear the number “2”.

The subsequent chapters shall begin on a fresh page (fresh odd number page in case of double sided printing). When header style is chosen the first page of each chapter will not have the header and the page number shall be printed at the center of the footer.

Pagination for pages before the Introduction chapter shall be in lower case Roman numerals, e.g., “iv”.

### **Paragraph format**

Vertical space between paragraphs shall be about 2.5 line spacing.

The first line of each paragraph should normally be indented by five characters or 12 mm. A candidate may, however, choose not to indent if he/ she has provided sufficient paragraph separation.

A paragraph should normally comprise more than one line. A single line of a paragraph shall not be left at the top or bottom of a page (that is, no windows or orphans should be left)

The word at the right end of the first line of a page or paragraph should, as far as possible, not be hyphenated.

## **Chapter and Section Format**

### **Chapter**

Each chapter shall begin on a fresh page odd number page with an additional top margin of about 75mm. Chapter number (in Hindu-Arabic) and title shall be printed at the center of the line in 6mm font size (18pt) in bold face using both upper and lower case (all capitals or small capitals shall not be used). A vertical gap of about 25mm shall be left between the Chapter number and Chapter title lines and between chapter title line and the first paragraph.

### **Sections and Subsections**

A chapter can be divided into Sections, Subsections and Sub-subsections so as to present different concepts separately. Sections and subsections can be numbered using decimal points, e.g. 2.2 for the second section in Chapter 2 and 2.3.4 for the fourth Subsection in third Section of Chapter 2. Chapters, Sections and Subsections shall be included in the contents with page numbers flushed to the right. Further subsections need not be numbered or included in the contents.

The Section and Subsection titles along with their numbers in 5 and 4mm (16 and 14pt) fonts, respectively, in bold face shall be flushed to the left (not centered) with 15 mm space above and below these lines.

In further subdivisions character size of 3 and 3.5 with bold face, small caps, all caps and italics may be used for the titles flushed left or centered. These shall not feature in the contents.

### **Table / Figure Format**

As far as possible tables and figures should be presented in portrait style. Small size table and figures (less than half of writing area of a page) should be incorporated within the text, while larger ones may be presented on separate pages. Table and figures shall be numbered chapter wise. For example, the fourth figure in chapter 5 will bear the number Figure 5.4 or Fig 5.4



Table number and title will be placed above the table while the figure number and caption will be located below the figure. Reference for Table and Figures reproduced from elsewhere shall be cited in the last and separate line in the table and figure caption, e.g. (after McGregor [12]).

Coloured graph/figure/photo/tables, if any, should not be photocopied in black and White.

### **3 Auxiliary Format**

#### **Binding**

The evaluation copies of the thesis may be spiral bound or soft bound. The final hard bound copies to be submitted after the viva-voice examination will be accepted during the submission of thesis with the following colour specification:

Ph.D. Thesis maroon with golden embossing of letters

#### **Front Covers**

The front covers shall contain the following details:

- Full title of thesis in 6 mm 22 point's size font properly centered and positioned at the top.
- Full name of the candidate in 4.5 mm 15 point's size font properly centered at the middle of the page.
- A 40 mm dia replica of the University emblem followed by the Name of the University Department/University Center/Research Center, name of the University and the year of submission, each in a separate line and properly centered and located at the bottom of page.

#### **Lettering**

All lettering shall be embossed in gold.

### **Bound back**

The degree, the name of the candidate and the year of submission shall also be embossed on the bound (side) in gold.

### **Blank Sheets**

In addition to the white sheets (binding requirement) two white sheets shall be put at the beginning and the end of the thesis.

### **Title Sheet**

This shall be the first printed page of the thesis and shall contain the submission statement: The Thesis/Dissertation/project Report submitted in partial fulfillment of the requirements of the Degree Ph.D., the name and Roll No. of the candidate, name(s) of the Supervisor and Co-supervisor(s) (if any), (Name of the University Department/University Center/Research Center), name of the university and year of submission.

Sample copy of the 'Title Sheet' is appended (**Specimen 'A'**)

### **Copyright notice**

The Ph.D. thesis must contain the following copyright certificate in the beginning of the thesis, on backside of the title sheet on the left side:

BIKANER TECHNICAL UNIVERSITY BIKANER, 20.. (Year)  
ALL RIGHTS RESERVED

### **Dedication Sheet**

If the candidate so desires he/ she may dedicate his/her thesis, which statement shall follow the title page. If included, this shall form the page 1 of the auxiliary sheets but shall not have a page number.

## **Approval Sheet**

In the absence of a dedication sheet this will form the first page and in that case shall not have a page number. Otherwise, this will bear the number three in Roman lower case “iii” at the center of the footer. The top line shall be:

### **1. Thesis Approval for Ph.D.**

**The Approval Sheets are to be included only in the hard bound copies which are submitted after the successful Ph.D. viva voce examination.**

A sample copy of the Approval Sheet is appended (**Specimen `B`**).

**The soft copy of the thesis needed for University library should have scanned image duly signed approval sheet.**

## **A Declaration of Academic Honesty and Integrity**

A declaration of Academic honesty and integrity is required to be included along with every thesis/dissertation/report after the approval sheet. The format of this declaration is given in **Specimen `C`** attached.

**The soft copy of the thesis needed for University library should have scanned image duly signed candidate’s declaration.**

## **Acknowledgements**

The acknowledgments by the candidate, signed by him/her with date, should be given before abstract.

## **Abstract**

### **For University Library**

The 500-word abstract shall highlight the important features of the thesis. Abstract along with the key words for search purpose shall be given in the electronic version to be submitted to the Library for inclusion in the website.

### **For thesis**

The abstract shall highlight the important features of the thesis, the layout of the thesis giving a brief chapter wise description of the work and the key words.

### **Contents**

The contents shall follow the Abstract and shall enlist the titles of the chapters, section and subsection using decimal notation, as in the text, with corresponding page number against them, flushed to the right.

### **List of Figures and Tables**

Two separate lists of Figure captions and Table titles along with their numbers and corresponding page numbers against them shall follow the Contents.

### **Abbreviation Notation and Nomenclature**

A complete and comprehensive list of all abbreviations, notations and nomenclature including Greek alphabets with subscripts and superscripts shall be provided after the list of tables and figures. (As far as possible, generally accepted symbols and notation should be used).

Auxiliary page from dedication (if any) to abbreviations shall be numbered using Roman numerals in lower case, while the text starting from the Introduction shall be in Hindu-Arabic. (The first pages in the both the cases shall not bear a page number).

#### **4. Overall order of thesis**

Title page  
Copyright notice (back of title page)  
Dedication Sheet (optional)  
Candidate's Declaration  
Approval Sheet  
Acknowledgements  
Abstract  
Contents  
List of Figures and Tables  
Abbreviation Notation and Nomenclature  
Chapter 1: Introduction  
Chapter 2:  
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Chapter \_: Summary and Conclusions  
Appendix  
References/ Bibliography  
Publications by the candidate  
Candidate's Profile

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SAMPLE COPY of  
HARD COVER

<THEESIS TITLE XXXXXXXX  
XXXXX THESIS TITLE>

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A THESIS

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*Submitted in partial fulfillment of the  
requirements for the award of the degree*

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*of*

14 Italic

DOCTOR OF PHILOSOPHY

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*By*

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<STUDENT NAME>

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BIKANER TECHNICAL UNIVERSITY  
BIKANER– 334004 (INDIA)

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FEBRUARY, 2023

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requirements for the award of the degree*

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BIKANER– 334004 (INDIA)

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Single  
Space

FEBRUARY, 2023

16 + Bold

**BIKANER TECHNICAL UNIVERSITY, BIKANER-2023  
ALL RIGHTS RESERVED**

12 + Bold &  
Both line  
Single space





# BIKANER TECHNICAL UNIVERSITY, BIKANER

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## CANDIDATE'S DECLARATION

14 + Bold underline

I hereby certify that the work which is being presented in the thesis entitled "**Thesis Title**" in partial fulfillment of the requirements for the award of the Degree of Doctor of Philosophy and submitted in the Department/ Centre of .....of the Bikaner Technical University, Bikaner is an authentic record of my own work carried out during a period from <date> to <Date> under the supervision of Dr....., ....., Department of ....., of <Name of Research center>.

12 + line space 1.5 and Topic in inverted comma's + Bold

The matter presented in this thesis has not been submitted by me for the award of any other degree of this or any other Institution.

12 + Line space 1.5

**(Student Name)**

12 + Bold

This is to certify that the above statement made by the candidate is correct to the best of my knowledge.

12 + Line space 1.5

**Date**

12 + Bold

12 + Unbold & both line Single space

(Name)  
Supervisor

## **Thesis Approval for Doctor of Philosophy**

This thesis entitled (Title..... ) by (Candidate Name.....) (Enrolment No....)  
submitted to the (University Department of ...../University Center/Research Center), Bikaner  
Technical University, Bikaner is approved for the award of the degree of Doctor of Philosophy.

### **Examiners**

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### **Supervisor (s)**

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Date:\_\_\_\_\_

Place :\_\_\_\_\_

