

# **GUIDELINES FOR PREPARATION OF THESIS AND SYNOPSIS**



**APJ ABDUL KALAM TECHNOLOGICAL UNIVERSITY  
THIRUVANANTHAPURAM**

# **GUIDELINES FOR THESIS PREPARATION**

**1. PREAMBLE**

**2. ORGANISATION OF THESIS**

**3. THESIS FORMAT**

**4. ORGANIZATION OF SYNOPSIS OF PhD THESIS**

## **1. PREAMBLE**

While utmost attention must be paid to the content of the thesis, which is being submitted in partial fulfilment of the requirements of degree, it is imperative that a standard format be followed. The same format shall also be followed in preparation of the soft copy (PDF) of the thesis. The thesis evaluation process is envisaged as an online process using the soft copies of abstract and thesis, uploaded by the college in the university portal. Two hard copies one each for the college and the University shall be submitted after the final viva-voce examination.

The following formatting guidelines have been designed to benefit current and future users of the thesis by ensuring that it is a complete, legible, well organized, and accessible document. These are intended to help students prepare their thesis manuscripts to an appropriate academic or professional standard.

## **2. ORGANISATION OF THESIS**

The following sequence for the thesis organization shall be followed:

Title Sheet

A declaration of academic honesty and integrity

Certificate of supervisor

Acknowledgement

Abstract

Table of Contents

List of Figures, Tables, Illustrations

Abbreviations, notations and nomenclature

Chapter 1 Introduction

Chapter 2 Review of literature

Chapters related to present investigation

Chapter related to Summary and conclusions, scope for future work

Appendices

List of References/Bibliography

***The maximum number of pages in the thesis may be limited to 300.***

**Front Cover:** The front cover shall contain Full title of thesis, Full name and Reg. No. of the candidate, University emblem followed by the name of the Department, Institute, University and the year of submission. Sample copy of the ‘Front Cover’ is appended (**Specimen 'A'**).

**Title Sheet:** This shall be the first printed page of the thesis and shall contain the submission statement: submitted in partial fulfilment of the requirements of the Degree, Ph.D, the name and Reg. No. of the candidate, name(s) of the Supervisor and Co-supervisor (s) (if any), Department, Institute, University and year of submission. Sample copy of the ‘Title Sheet’ is appended (**Specimen 'B'**).

**A Declaration of Academic Honesty and Integrity:** A declaration of academic honesty and integrity is required to be included along with every thesis. The format of this declaration is given in **Specimen 'C'** attached.

**Certificate of supervisor(s):** A certificate from the supervisor(s) is required to be included along with every thesis. The format of this certificate is given in **Specimen 'D'** attached.

**Acknowledgement:** The contents and format of this page is up to the student to decide.

**Abstract:** The abstract shall highlight the important features of the thesis. Abstract should be self-complete and contain no citations for which the thesis has to be referred.

**Contents:** The contents shall follow the Abstract and shall enlist the titles of the chapters, section and sub-section using decimal notation, as in the text (title case), with corresponding page number against them, flushed to the right.

**List of Figures and Tables:** Two separate lists – 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 notations should be used).

*Preliminary pages 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 both the cases shall not bear a page number).*

## **MAIN PAGES**

The main pages of the thesis shall be presented in a number of chapters, starting with Introduction and ending with Summary and Conclusions. Each of the other chapters will have a precise title reflecting the contents of the chapter. A chapter can be subdivided into *sections, sub-sections and sub-sub-section* so as to present the content discretely and with due emphasis.

**Introduction:** The title of **Chapter 1** shall be Introduction. It shall justify and highlight the problem posed, define the topic and explain the aim and scope of the work presented in the thesis. It shall highlight the significant contributions from the investigation.

**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.

**Report on the present investigation:** The reporting on the investigation shall be presented in **one or more chapters** with appropriate chapter titles.

- Due importance shall be given to experimental setups, procedures adopted, techniques developed, methodologies developed and adopted.
- Comparison/merits of the proposed work with relevant state of the art in the field shall be included appropriately.
- 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.
- 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.

- 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 shall bring out the contributions from the study. The discussion shall logically lead to inferences and conclusions. This chapter is not compulsory, if the results and discussions are included earlier in contributing chapters.

**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.

**Limitations of the research and scope for future work:** Limitations of the research and scope for future work shall be stated lucidly in the last part of the chapter.

**Appendix or Appendices:** 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 “Literature Cited/Bibliography” section.

**Literature Cited/Bibliography:** The candidates shall follow the style of citation and style of listing in one of the standard journals in the subject area consistently throughout his/her thesis, for example, IEEE in the Department of Electrical Engineering, Materials Transactions in Department of Metallurgical Engineering and Materials Science. However, the names of all the authors along with their initials and the full title of the article/monogram/book etc. have to be given in addition to the journals/publishers, volume, number, pages(s) and year of publication.

Citation from websites should include the names(s) of author(s) (including the initials), full title of the article, website reference and when last accessed. Reference to personal communications, similarly, shall include the author, title of the communication (if any) and date of receipt.

**Publications by the candidate:** Articles, technical notes etc. on the topic of the thesis published by the candidate may be separately listed after the literature cited. This may also be included in the contents.

### **3. THESIS FORMAT**

#### ***PAPER QUALITY***

The thesis shall be printed/ photo copied on white paper, 75 gsm or more.

#### ***PAPER SIZE, FONT AND MARGINS***

**Paper Size:** The size of the paper shall be standard A4; (height 297 mm, width 210 mm) for soft copy of thesis. Library copies shall be printed on A5.

**Font:** A standard legible font such as Times New Roman or equivalent of 12pt with 1.5 line spacing may be used.

**Margins:** The main body of the thesis shall be printed on both sides of sheets.

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

Top Margin	25 mm
Bottom Margin	25 mm
Left Margin of odd number page	35mm
Left Margin of even number page	25mm
Right Margin of odd number page	25mm
Right Margin of even number page	35mm

**Pagination:** Page numbering in the text of the thesis shall be Hindu – Arabic numerals at the centre of the footer.

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 odd number page.

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 line spacing.

The first line of each paragraph should normally be indented by five characters or 12mm. A candidate may, however, choose not to indent if (s)he 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 centre of the line in 18pt (6.35mm) font size in bold face using both upper and lower case. 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 Sub-sections:** A chapter can be divided into Sections, Sub-sections and Sub-sub-sections so as to present different concepts separately. Sections and sub-sections can be numbered using decimal points, e.g. 2.2 for the second section in Chapter 2 and 2.3.4 for the fourth Sub- section in third Section of Chapter 2. Chapters, Sections and Sub-sections 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 Sub-section titles along with their numbers in 16pt and 14pt (5.64mm and 5mm) fonts, respectively, in bold face shall be flushed to the left (not centred) with 15mm space above and below these lines.

In further subdivisions character size of 3 and 3.5 with bold face, small caps/italics may be used for the titles flushed left or centred. 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.

### ***FORMAT OF FRONT COVER***

**Lettering:** All lettering shall be embossed.

#### **Front Cover:**

- Full title of thesis in 17pt (6mm) size font (sentence case in bold) properly centred and positioned at the top.
- **DOCTOR OF PHILOSOPHY** in 14pt (5mm) size font in capital bold
- Full name of the candidate in 14pt (5mm) size font properly centred at the middle of the page.
- Register Number in 12pt (4.23mm) size font
- A 30mm x 40mm size replica of the University emblem followed by the name of department, Institute, University and the year of submission in 14pt (5mm) size font, each in a separate line and properly centred and located at the bottom of page
- Cover page – black colour

**Bound back:** The name of the candidate, title, year of submission and degree shall also be embossed on the bound (side).

## ***FORMAT OF TITLE PAGE***

- Full title of thesis in 17pt (6mm) size font (sentence case in bold) properly centred and positioned at the top.
- *Submitted in partial fulfilment of the requirements of the degree of 12pt (4.23mm) size font in italics)*
- **DOCTOR OF PHILOSOPHY** in 14pt (5mm) size font in capital bold
- Full name of the candidate in 14pt (5mm) size font properly centred at the middle of the page
- Register Number in 12pt (4.23mm) size font
- Name(s) of Supervisor and Co-supervisor in 12pt (4.23mm) size font
- A 30mm x 40mm size replica of the University emblem followed by the name of department, Institute, University and the year of submission in 14pt (5mm) size font, each in a separate line and properly centred and located at the bottom of page

## **4. ORGANIZATION OF SYNOPSIS OF THESIS**

The following sequence shall be used for organizing synopsis of the thesis

**Front Cover** (see Specimen 'E')

**Title of thesis**

**Introduction** – Outline briefly the technological/engineering/scientific relevance of the research work being reported

**Motivation** – Discuss the developments in the area of research to trace out status and importance of the research problem

**Objectives and scope** – State clearly the research problem addressed and define boundaries within which the research has been carried out

**Description of research work** – Give brief but sufficient details of research problems, solution methodologies, interpretation of results etc

**Conclusion /Limitations** – Give major conclusions and limitations of research

**References** – List references as discussed in thesis format. All these references must be discussed in synopsis write-up

**Tables and figures** – All the tables and figures shall be captioned, serially numbered and referred in the write-up

**Proposed contents of the thesis** – Include chapter and section titles

**List of Publications based on the research work**

Style of preparation of synopsis shall be same as thesis. Maximum pages in synopsis write-up shall be 20 including cover pages.

Softcopy of synopsis of the thesis (PDF form) shall be prepared and uploaded in e-Gov portal for enabling online evaluation of thesis.

**Specimen 'A': Front Cover**

**Title**

**DOCTOR OF PHILOSOPHY**

Name of the Candidate

Register No. XXXX



Name of the Department

Institution

**APJ ABDUL KALAM TECHNOLOGICAL UNIVERSITY**

Thiruvananthapuram

Year

**Specimen 'B': Title Sheet**

**Title**

*Submitted in partial fulfilment of the  
requirements of the degree of*

**DOCTOR OF PHILOSOPHY**

Name of the Candidate

Register No. XXXX

Supervisor (s):



Name of the Department

Institution

**APJ ABDUL KALAM TECHNOLOGICAL UNIVERSITY**

Thiruvananthapuram

Year

## **Specimen 'C' – DECLARATION**

I declare that this written submission represents my ideas in my own words and where others' ideas or words have been included, I have adequately cited and referenced the original sources. I also declare that I have adhered to all principles of academic honesty and integrity and have not misrepresented or fabricated or falsified any idea/data/fact/source in my submission. I understand that any violation of the above will be cause for disciplinary action by the University and can also evoke penal action from the sources which have thus not been properly cited or from whom proper permissions have not been taken when needed.

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Signature

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Name of the candidate

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Register No. XXXX

Date:

## **Specimen 'D' – CERTIFICATE**

It is certified that the work contained in the thesis titled “Title of the Thesis,” by “Name of the Candidate,” has been carried out under my/our supervision and that this work has not been submitted elsewhere for a degree.

Signature of Supervisor (s)

Name (s)

Designation (s)

College (s)

Date :

Place :

**Specimen 'E': Front Cover of Synopsis**

**SYNOPSIS OF**

Title

*A THESIS*

*to be submitted by*

Name of the Candidate

Register. No.XXXX

*for the award of the degree*

*of*

**DOCTOR OF PHILOSOPHY**



Name of the Department

Institution

**APJ ABDUL KALAM TECHNOLOGICAL UNIVERSITY**

Thiruvananthapuram

Year