

GUIDELINES FOR PREPARING THE THESIS

1. GENERAL

As enshrined in the Minimum Standards Regulations of U.G.C. and Ordinances of the Rama University, U.P., Kanpur, the thesis being a documented manifestation of the objectives of the proposed research, shall report, in an organized and scholarly fashion, an account of the original research work of the scholar and present the findings in an appropriate manner with actual accomplishments of the work plainly stated and honestly appraised. The purpose of this manual is to provide broad guidelines to the Ph.D. candidates for the preparation of the thesis. It lists the general and specific requirements governing the thesis preparation including guidelines for structuring the contents. The candidates are advised to have thoroughly gone through the up-to-date Ph.D. Ordinances, and other relevant documents brought out from time to time by UGC/ University. Further, for style, structure and presentation of a very special type of work specific to a particular field, the scholar may refer to additional style manuals or reference guides and to the published literature in their respective fields of study.

2. CONTENTS OF THESIS The sequence in which the thesis contents should be arranged and bound should be as follows:

1. Cover Page and Title Page
2. Certificate(s) from Supervisor(s)
3. Abstract
4. Acknowledgements
5. Table of Contents
6. List of Tables
7. List of Figures
8. List of Symbols, Abbreviations and Nomenclature
9. Chapters 1, 2 ,
10. Conclusion & recommendations
11. Bibliography
12. Appendices(if any)
13. List of Publications (out of the candidate's present work)

The tables and figures shall be introduced at the appropriate places.

3. MANUSCRIPT PREPARATION Page Dimensions, Margins and Quality

- The page dimensions of the final copies of the thesis should be 290mm x 205mm. Standard A4 size (297mm x 210mm) paper may be used for preparing the copies. It should have the following page margins:

Top edge : 30 to 35 mm Bottom edge : 25 to 30mm Left side : 35 to 40mm Right side : 20 to 25 mm

- The thesis should be prepared on good quality white paper preferably not lower than 80 gsm.

- Tables and figures should be prepared on good quality paper preferably not lower than 80 gsm. Tables and figures should conform to the margin specifications. Large size figures should be photographically or otherwise reduced to the appropriate size before insertion.

Cover Page/ Title Page It carries

(a) the TITLE of the thesis (Times New Roman, font size 20, bold, single line spacing, all characters uppercase except the symbols and numerals if used in the title of the thesis; centered within the specified margin of the page).

(b) the phrase (Times New Roman, font size 14, bold, each line in the Title/Sentence mode, single line spacing, centered within the specified margin of the page).

A Thesis Submitted in Partial Fulfillment of the Requirements for the Degree of DOCTOR OF PHILOSOPHY (Times New Roman, font size 20, bold, the whole line in uppercase, centered within the specified margin of the page).

by

(C) NAME OF STUDENT (Times New Roman, font size 16, bold, full name as enrolled, all characters in Title mode case , centered within the specified margin of the page).

(D) (Enrollment Number) (Times New Roman, font size 12, bold, all numerals within a pair of small parenthesis, underneath the name of candidate and centered within the specified margin of the page).

(E) phrase of supervision (Times New Roman, font size 12, bold, line in the Title mode, centered within the specified margin of the page).

Under the Supervision of

(h) NAME(S) OF SUPERVISOR (Times New Roman, font size 14, full name in title mode prefixed by Prof. or Dr. centered within the specified margin of the page, separated symmetrically in case of two supervisors, use the next line in case of three supervisors; brief one-line mention of the names of the institution of the supervisors).

(i) University logo (size = 25-30 mm dia)

(j) phrase for the name of faculty (Times New Roman, 12/14 pts., bold, full name of the University faculty in title mode, centered within the specified margin of the page).

to the **Faculty of (Name of the Faculty)** For example, **Faculty of Applied Sciences**

(k) Name of the University (Times New Roman, font size 16/14, bold, full name, all characters upper case/Title mode, centered within the specified margin of the page).

RAMA UNIVERSITY KANPUR

(l) Month, Year ((Times New Roman, font size 14, bold, full name of the month in title mode, comma, 4-digit year in Arabic, all centered within the specified margin of the page).

The place and date of signature (left justified) common for all the supervisors will appear below the signature(s) of the supervisor(s). **Abstract** Abstract should be an essay type of narration not exceeding four pages outlining the research problem, the methodology used, a summary of the findings, possible applications of the research, and suggestions/directions for future research. The abstract should not contain cross citations. It should be typed single line spacing, in Times New Roman with font size 12 within the specified margin of the page. It should begin with the heading as the title of the thesis in title mode centered (bold), the name of candidate (next line) centered, and then 'ABSTRACT' with font size 14, bold and centered. The text of abstract should begin thereafter.

Acknowledgements (optional) Acknowledgements shall be brief and should not exceed one page when typed in single spacing Times New Roman with font size 12 within the specified margin of the page. It should begin with title **ACKNOWLEDGEMENTS** Times New Roman with font size 14 bold as heading placed in centre The signature of the candidate shall be made at the bottom right end above his./her name typed in title case. **Table of Contents** The table of contents should list all the contents following this section. The preceding section like the Title Page, Certificate and Acknowledgements will not find a place amongst the items listed in the Table of Contents, but the page numbers in lower case Roman letters shall be accounted for them. The title **TABLE OF CONTENTS** in Times New Roman with size 14 bold as heading be placed in centre. One and a half spacing should be adopted for typing the contents in a manner shown in specimen copy of the Table Contents as given in Annexure III. **List of Tables** The list of tables should use exactly the same numbers and captions as they appear above the tables in the text. See. Single spacing in Time New

Roman with size 12 should be used. **List of Figures** The list of figures should use exactly the same numbers and captions as they appear below the figures in the text. Single spacing in Time New Roman with size 12 should be used **List of Symbols, Abbreviations and Nomenclature** Single spacing in Time New Roman with size 12 should be used typing the matter under this head. As far as possible, standard and popularly used symbols, abbreviations etc. should be adopted. **Chapters** Chapters of a thesis may be broadly divided into 3 parts (i) introduction, literature survey and identification of problem and issues (ii) statement, formulation and presentation of the problem, solution approach (iii) findings, results, discussion, implementation and conclusions, and directions for future research.

- Each part may be suitably divided into several chapters, and a chapter may be further divided into several sections and sub-sections, sub-sub-sections.
- Each chapter should be given an appropriate title.
- Tables and figures in a chapter should be typed in title mode in single space in Time New Roman with font size 12. The titles of tables should be placed directly above the table whereas the titles of figures should be placed directly underneath the figure in the very same page which refers to the contents they annotate.
- Footnotes should be used sparingly. They should be typed single space and placed directly underneath in the very same page which refers to the material they annotate.

Tables and figures : By the word Table is meant the representation of tabulated numerical as well as non-numerical data in the body of the thesis and also in the appendices. All other non-verbal material used in the body of the thesis and appendices such as charts, graphs, maps, photographs and diagrams may be designated as figures. A proper representation of a table or a figure and its placement immensely adds to the ability to comprehend the work. Here are few suggestive guide lines in this regard which, of course, in no way substitute the ingenuity and creativity of an author.

- A table or figure including its caption should be accommodated within the prescribed margin limits and should appear on the page where its reference is made or on the page following the page in case it is not possible to place it on the same page.
- Table and figures on half or less in length should necessarily appear on the same page along with the text. However, they should be separated from the text both above and below by double spacing.
- All tables and figures should be prepared on the same paper or material used for the preparation of the rest of the thesis.

- Captions of table/figures may use characters, numerals or symbols in the title mode.
- Two or more small tables or figures may be grouped if necessary on a single page.
- Wherever possible; the entire colour photographs(s) may be reproduced on a full sheet of photographic paper. More than one photograph can be included on a page.

Citation of References in the Thesis Any work of other researchers used either directly or indirectly used in the research must be indicated at appropriate places in the thesis. It could be a journal paper, a paper in a conference proceedings, a monograph, a personal communication, or a book; in physical or electronic form. There are several standards for referencing. A candidate may chose one of his/her choice with the consent of the thesis supervisor(s) and should be consistent throughout. A simple and commonly approach is suggested here. A reference (other than a book or monograph) should be mentioned at the appropriate places in the text of the thesis by the last name of the first author followed by the year of publication placed inside a pair of parentheses.

In case of a book or a monograph, however, the name/s of author should be followed by the year within the pair of parentheses. For example, Chopra and Meindl (2003) have dealt at length the analysis and design of supply chain. For the references having two authors, the last names of the two authors in the order of appearance can be used while for more than two authors, generally the last name of the first author followed by et al and then the year within parentheses is used.

Listing of References in the REFERENCE section The listing of references should be typed in alphabetical order of the first author's name in single spacing starting 4 spaces below the heading **REFERENCES** in Times New Roman with font size 14 bold. The name/s of the authors/authors should be immediately followed by the year and other details. The references should be serially numbered, separated by single space. The papers (in journal or proceedings) should be in sentence mode followed by the name of journal (in italics), vol. issue, page (from-to) while the book titles should be in title mode in italics followed by the place and publishers. E-resources should have their proper URL. A typical illustrative list given relates to the citation examples quoted above. For typing the references, Times New Roman with font size 11 is recommended. Jha, J.K. and Shanker, K., 2009. A single-vendor single-buyer production-inventory model with controllable lead time and service level constraint for decaying items. *International Journal of Production Research*, Vol. 47, Issue 24, pp. 6875–6898. Chopra, S. and Meindl, P., 2003. *Supply Chain Management: Strategy, Planning, and Operation*. New Jersey, Prentice Hall. Kumar Neeraj and Shanker Kripa, 2000a, A theory of balancing mechanism for comparing the effectiveness of imbalance measures in FMS loading, Proceedings of the Special International Conference on Production Research (ICPR) 2000, Bangkok, August 2-4, 2000, pp 133-139. Kumar Neeraj and Shanker Kripa, 2000b, Interaction among FMS loading objectives: a parabolic relationship between workload balance and machine utilization, Proceedings of the Special International Conference on Production Research (ICPR) 2000, Bangkok, August 2-4, 2000, pp 234-239. Snyder, L.V., 2004. *Lehigh University*. [Online] (1.3) Available at:

<http://www.lehigh.edu/~lvs2/download/vrpsolver.html> [accessed 17 December 2008].

Appendices Appendices in a thesis are provided to give supplementary information, which if included in the main text may serve as a distraction and could tend to dilute the central theme under discussion.

- Each appendix must find its reference in the main body of the thesis.
- Appendices shall carry the title of the contents reported and the same title shall be made in the contents page also.
- Appendices should be numbered using Roman numerals in upper case, e.g. Appendix I, Appendix II, etc.
- Figures, tables, equations and references appearing in appendices should be numbered locally to an appendix e.g. II.1, II.2, III.5 etc and should be referred to at appropriate places just as in the case of chapters.
- All quotations exceeding one line should be typed in an indented space - the indentation being 15mm from either margin.

THESIS SUBMISSION AND BINDING SPECIFICATIONS **Preparation of Research Summary** After the completion of the research work and preparation of the draft thesis, a research summary is to be prepared in close contact with the thesis supervisor(s). It should begin with the title of the thesis (in Times New Roman with size 14 bold, centered), a single space gap, followed by the name and enrollment of the candidate (in Times New Roman with size 12 bold, centered) and then a single space gap followed by the title **Research Summary** (in Times New Roman with size 12 bold, centered). After a gap of a space, the text should begin on the same page (there is no need for a title page). Like the thesis, the Research Summary may be broadly divided into 3 parts (i) introduction, literature survey and identification of problem and issues (ii) statement, formulation and presentation of the problem, solution approach (iii) findings, results, discussion, implementation and conclusions, and directions for future research. It should be typed single line spacing, in Times New Roman with size 12 within the specified margin of the page. The total number of typed pages should not exceed 10. The use of tables, figures, equations should be absolutely minimum unless they are extremely essential. Only the essential references should appear in the text. Sections and subsections (not exactly the same as used in the main thesis) may be used to enhance the readability. Only minimal essential part of appendices and reference list should be included as part of the Research Summary.

(ii) a CD with exactly identical contents in pdf format. The candidate should ensure that the CD can be opened on any system. **(a)** Certificate of Final Thesis Submission (Annexure V) signed by the candidate and the supervisor(s) certifying that all the corrections suggested by the examiners have been incorporated, the thesis has been prepared as per guidelines, due credit to other researchers have been appropriately accorded and no part of the thesis is copied from any other source. The content should be verified from Plagiarism software preferably URKUND software as suggested by the U.G.C. **(b)** The thesis should be printed on both sides on good quality white paper not less than 80gsm and hard bound as per specifications given in Annexure VI. The cover page should be printed as per specifications for the title page (Annexure I) except that it will include month and year of final submission. **(c) Colour Code :** The colour code for the thesis will be as follows : (i) **Ph. D.** – cloth bound **dark blue** background with impressions embossed in permanent **golden colour**. The side back of the thesis should also carry the title, name of candidate and month and year of final submission.

7. SIZE OF THESIS

There is no rigid restriction on the size of the thesis. However, for Ph.D. it should not generally exceed 300 pages of the typed matter beginning from the first page of Chapter I to the last page of the last Appendix.

REFERENCES For knowing more about the styles and presentation, the following few references may be of interest. These are, however, not required for a candidate to go through for the preparation of the thesis to be submitted at GBTU.

- (a) Michaelson, H.B. How to Write & Publish Engineering Papers and Reports. Oryx Press, Phoenix.
- (b) Turner, R.P. Technical Report Writing. Rinehart Press, San Francisco.
- (c) Turk, C. and Krikman, J. Effective writing: Improving Scientific, Technical and Business Communication. E & FN Spon, London.
- (d) Campbell, W.G., Ballou, S.V. and Slade, C. Form and Style: Theses, Reports, Term Papers. Houghton Mifflin Co., Boston.
- (e) MLA Style Manual and Guide to Scholarly Publishing. Modern Language Association, New York.
- (f) Sternberg, D. How to Complete and Survive a Doctoral Dissertation. St. Martin's Griffin, New York.
- (g) Day, R.A. and Gastel, B. How to Write and Publish a Scientific Paper. Greenwood Press, Westport.
- (h) Booth, W.C., Colomb, G.G. and Williams, J.M. The Craft of Research. The University of Chicago Press, Chicago.

Annexure – I A Thesis on

**TITLE OF THESIS TITLE OF THESIS TITLE OF
THESIS TITLE OF THESIS TITLE OF THESIS**

A Thesis Submitted

**In Partial Fulfillment of the Requirements
for the Degree of**

DOCTOR OF PHILOSOPHY

by

NAME OF STUDENT

(Enrollment No.)

Under the Supervision of

Dr NAME OF SUPERVISOR

Institution

to the

FACULTY OF

RAMA UNIVERSITY UTTAR PRADESH KANPUR

Month, Year

ANNEXURE II**CERTIFICATE**

Certified that **Name of student** (enrollment no.....) has carried out the research work presented in this thesis entitled "**Title of Thesis.....**" for the award of **Doctor of Philosophy** from Rama University Uttar Pradesh Kanpur under my supervision. The thesis embodies results of original work, and studies are carried out by the student himself/herself and the contents of the thesis do not form the basis for the award of any other degree to the candidate or to anybody else from this or any other University/Institution.

Signature Signature (Name of Supervisor) (Name of Supervisor) (Designation) (Designation)
(Address) (Address) Date:

 Note : In case of only one supervisor, the sole supervisor will sign on the right side and the details on the left will not be printed. In case of three supervisors, the third one along with his/her name, designation, address will sign in the centre of the page underneath the details of the two other supervisors. The date, however, will be common to all.


Registrar

Copy to:-

1. Secretary to Hon'ble Chancellor
2. Secretary to Hon'ble Vice-Chancellor
3. All Deans.
4. Research Coordinator/ Director (Research)
5. Website Incharge