GUIDELINES FOR PREPARATION

AND SUBMISSION OF PhD THESIS/DISSERTATION

(Economics, Commerce and Management & All Social Sciences)

CMR UNIVERSITY
Private University Estd in Karnataka State by Act No. 45 of 2013

SCHOOL OF RESEARCH AND INNOVATION

CMR UNIVERSITY, BANGALORE

CONTENTS

1. INTRODUCTION:

The Thesis/Dissertation is a treatise that represents the fulfillment of the scholarly aspiration of the scholar. A good Thesis/Dissertation should be clear and unambiguous and have a logical structure that should assist the reader's understanding of the argument being presented and not obscure it. In order to achieve this objective, the layout and physical appearance of the Thesis/Dissertation should conform to a set pattern.

The purpose of this handbook is to outline the guidelines that a PhD Thesis/Dissertation submitted to the University should adhere to. This manual provides an overview of the format for the preparation of the PhD Thesis/Dissertation and guidelines for the submission of the Thesis/Dissertation.

Writing a Thesis/Dissertation is one of the most creative challenges for a research scholar. It offers scholars the opportunity to prove that they have the ability to implement the knowledge they have acquired throughout their studies and to carry out in-depth research into a topic of their choice under the guidance of a supervisor.

The purpose of a Thesis/Dissertation must be clear and provide answers to the following:
1. Why the chosen topic is important from an academic point of view?
2. Why the topic is of interest from a practical point of view?
3. What are the benefits to the academic world?

The Thesis/Dissertation for the Doctoral Program (Ph.D) **must be written in English.**

2. PREPARING A REASERCH PROPOSAL:

Scholars who have completed the two semesters and are enrolled in the third semester of the Ph.D program are eligible to submit a research proposal in consultation with their respective supervisor. This proposal needs to be submitted within a two months after the research supervisor is allotted in the 3rd semester.

The research proposal includes the following:
1. Title of the Thesis/Dissertation.
2. Brief description of the topic.
3. Explanation of the importance of the topic and a statement of the reason(s) for undertaking the specific research project.
4. Preliminary Table of Contents.
5. Description of the methodology.
6. Possible outcomes of the study

Topic Selection - Basic characteristics and assumptions

The research for the elaboration of the Thesis/Dissertation must have certain basic characteristics and must fulfill a number of prerequisites. A Thesis/Dissertation should have scientific originality (i.e. the possibility of leading either to a scientific publication in the form of book or academic journal or conference) and/or contributing new knowledge to the topic examined. The Thesis/Dissertation content must create the ability to positively affect future research within that particular research area and may enrich the knowledge of the author to enable the attainment of professional goals.

The Thesis/Dissertation topic must be accomplishable and precise. Scholars should select topics that allow them to make maximum use of their knowledge and analytical skills. The choice of topic may arise either from ideas inspired from discussions during course work classes, Doctoral Committee meetings or from their own interests. The Thesis/Dissertation is an academic endeavor and therefore it may not be too general or simply a skills' exercise. A Thesis/Dissertation that combines academic rigor with practical application(s) is the ideal case. Doctoral Scholars should be aware that a Thesis/Dissertation topic usually combines four interacting factors, namely the **research area**, the **business/Scientific sector** in which the Thesis/Dissertation is positioned, the **Thesis/Dissertation classification** and the most common **methodology/tools** employed (see Figures 1 and 2).

Figure 1: The four interacting factors combined in a Thesis topic

RESEARCH AREA

- European Business
- Business Information Systems
- Decision Making
- International Economics
- Corporate Finance
- International Finance
- Accounting
- Human Resource
- Investment Analysis/Portfolio Management
- Management
- Strategic Management
- Marketing
- Supply Chain

METHODOLOGY

- Literature Review-Scholarship
- Primary Research (through questionnaires, in-depth interviews, collection of primary data, etc.)
- Secondary Research (collection of data from known, available sources)

TOOLS

- Comparative analysis
- Critical review of the literature
- Descriptive Statistics
- Econometric analysis
- Inferential Statistics
- Mathematical modeling
- OR tools
- Time series analysis

DISSERTATION CLASSIFICATION

- Algorithm implementation
- Business data analysis
- Case Study
- Comparative study
- Literature based survey
- Quantitative application/study
- Sectoral study
- Theoretical framework development

BUSINESS SECTOR

- Advanced Engineering
- Agriculture, Horticulture & Fisheries
- Airports
- Automotive
- Biotechnology & Pharmaceuticals
- Chemicals
- Clothing, Footwear & Fashion
- Communications
- Construction
- Creative & Media
- Defense
- Education & Training
- Electronics & IT Hardware
- Energy & Fuels
- Engineering
- Environment
- Financial Services
- Fire, Police & Security
- Food & Drink
- Healthcare & Medical
- Household Goods, Furniture & Furnishings
- ICT
- Legal Services
- Leisure & Tourism
- Logistics
- Maritime
- Manufacturing
- Metals & Minerals
- Mining
- Public sector
- Railways
- Sports
- Etc.

Figure 1: Decomposition of the four interacting factors

Research Area:

An area of research that interests the scholar must be selected. The definition of a research problem guides the entire scientific process and is the foundation of any research method and experimental design, from a realistic experiment to a case study.

Business Sector:

All Thesis/Dissertation should deal with an issue of an economy's subset, as presented in Figure 1.

Thesis/Dissertation classification:

- *Algorithm implementation:* Is a step-by-step procedure for calculations. More precisely, it is an effective method expressed as a finite list of well-defined instructions for calculating and solving a specific problem. Algorithms are used for dealing with calculation, data processing and automated reasoning.

- *Business data analysis:* Focuses on a particular business issue and then interprets data gathered to suggest implementation of solutions. Again a number of tools can be used such as statistics, mathematics, computing etc.

- *Case study:* A case study uses a specific example to illustrate a theoretical approach, a general trend or a variety of management problems. It can refer to general problems and trends as well as to specific ones.

- *Comparative study:* Comparative analysis can clarify the behaviour or distinguishing characteristics of some phenomenon. It can be applied in a variety of contexts (e.g. comparing models or methods or trends at a national or corporate level etc.)

- *Literature-based survey:* This is likely to be the methodology of selection and discussion of theoretical material and descriptive material, in context, and detailed comparison of theories in terms of their applicability. The focus is not on discovering something but on reaching a judgment about the value of key concepts or theories.

- *The Quantitative application/study:* The quantitative approach is also known as the traditional, positivist, empiricist approach to research. Quantitative studies are typically experiments that test a theory composed of "variables" (constructs or phenomena), measured with numbers, and analysed using statistical procedures. They take the perspective that events can be understood in terms of cause and effect.

- *Sectoral study:* A review and assessment of the current condition and future prospects of a given sector of the economy. It may include a statistical analysis of the size, demographic, pricing, competition and other economic dimensions of a sector of the economy. The analysis can be conducted by industry or by customer designation.

- *Theoretical framework development:* The theoretical framework is not something that is found readily available in literature. Theoretical frameworks are a type of intermediate theory that attempt to connect all aspects of inquiry (e.g. problem definition, purpose, literature review, analysis etc.). A theoretical framework can act like a map that gives coherence to empirical inquiry.

Methodology/Tools: Typically a Thesis/Dissertation will employ data. Data should be validated and should originate from primary or secondary sources. Primary data comes mainly from questionnaires, interviews etc. Secondary data is usually sourced from books, articles, published reports and electronic databases. The supervisor may assist the scholar regarding the type of data or information that is most suitable to the Thesis/Dissertation topic. The supervisor is also able to advise the scholar on appropriate methods, practices or tools for data collection. The methodology must be based on generally accepted principles that can be easily and precisely assessed.

Typically the tools that may be utilized in a Thesis/Dissertation are one or more of the following:

- *Comparative analysis:* The item-by-item comparison of two or more comparable alternatives, processes, products, qualifications, sets of data, systems, etc.
- *Critical review of the literature:* A critical and in-depth evaluation of previous research. It is a summary and synopsis of a particular area of research.
- *Descriptive Statistics***:** The discipline of quantitatively describing the main features of a collection of data.
- *Econometric analysis***:** the application of mathematics and statistical methods to economic data.
- *Inferential Statistics***:** Provide ways of testing the reliability of the findings of a study and "inferring" characteristics from a small group (sample) onto much larger groups (the population).
- *Mathematical modeling***:** The process of developing a mathematical model, i.e. a description of a system using mathematical concepts and language.
- *Operational Research/Management Science (OR/MS) tools***:** Mathematical programming, heuristic algorithms, Monte Carlo simulation, discrete event simulation, decision trees, Bayesian decision making, analytic hierarchy process, etc.
- *Time series analysis***:** Time series analysis accounts for the fact that data points taken over time may have an internal structure (such as autocorrelation, trend or seasonal variation) that should be accounted for.

3. COMPLETION OF THE THESIS/DISSERTATION

Objectives of the Thesis/Dissertation Report:

The objectives of the Thesis/Dissertation report and Viva-voce examination are to inculcate organizational, analytical, self-evaluation and time management skills of the scholar.

General Considerations:

At the CMR University, the Thesis/Dissertation is expected to be of high scholarly competence and of the highest academic standards. Hence, upon its completion the Thesis/Dissertation must convey the message of the research succinctly and clearly. Attention must be paid to the structure, syntax and grammar of the

Thesis/Dissertation. Poor syntax, poor grammar, spelling and syntax errors, lack of structure, or inaccuracies in the tools, data or references are important Thesis/Dissertation flaws and may lead to major revisions or even rejection of the Thesis/Dissertation. The content and arguments must flow logically and consistently throughout the Thesis/Dissertation and must be relevant to the topic. The use of tabulations and illustrations such as figures and tables is encouraged, as visual means that support and reinforce the linguistic arguments.

A Thesis/Dissertation should be solely the outcome of work carried out by the scholar.

CMRU Document and Formatting Conventions:

Thesis/Dissertation should be prepared according to the specifications outlined by the School of Research and Innovation guidelines. Additional considerations are presented in the sequel:

- The length of a Thesis/Dissertation should be between 200-250 printed pages. This page limits do not include appendices, the glossary which gives explanations of the abbreviations used, symbols and technical terms (if included) and the references.

- Pages must be numbered consecutively. Page numbers should appear at the bottom right side of the page. The page numbering may commence at the title page or different numbering may be used between the front matter and main content of the Thesis/Dissertation (e.g. Latin numbering for the front matter and Romanic numerals in the main content). In any case, the page numbering for the main content must always be in Romanic numerals.

- Tables and figures should be numbered consecutively within each chapter (chapter number first; e.g. Table 2.1 and Figure 2.1 are the first Table and the first Figure in Chapter 2, respectively).

- Numbering of Equations: Mathematical equations must be written clearly (centre alignment) and numbered in parentheses. Numbering of Equations appearing in each Chapter or Appendix should be numbered serially, the numbering should commence afresh for each Chapter or Appendix. Thus for example, an equation appearing in Chapter 4, if it happens to be the eighth equation in that Chapter should be numbered as (4.8) thus: (4.8)

$$\left[\frac{\partial}{\partial x}\left[\frac{p^2}{h} \right] + \frac{\partial}{\partial y}\left[\frac{pq}{h} \right] \right] = -gh\frac{\partial \eta}{\partial x} - k\frac{\sqrt{p^2+q^2}}{h^2}p + \frac{1}{\rho_w}\left[\frac{\partial}{\partial x}\left(h\tau_{xx} \right) + \frac{\partial}{\partial y}\left(h\tau_{xy} \right) \right] \quad (4.8)$$

While referring to this equation in the body of the Thesis it should be referred to as Equation (4.8).

- Tables and figures must be titled and explicitly commented and referred to in the text.

- Sources to original or derived tables and figures from other authors must always be cited [e.g. Source: Boddy, 2008 (p.227, Table 7.2)].

- Appendices should be explicitly cited in the text (e.g. "..., *which is presented analytically on Appendix*

B.").

- If the topic of the Thesis/Dissertation is law-related, there must be the necessary documentation, corresponding to the academic legal texts (publications, articles etc.).

Structure of the Thesis/Dissertation:

An illustrative outline of a typical Thesis/Dissertation structure is presented below. It is necessary that the scholar should follow the guidelines. The final report should be presented in the following sequence:

1. Title (Cover) page
2. Inner Cover page
3. Self Declaration Certificate by the candidate
4. Certificate by the Research Supervisor/Co-Supervisor (if any)
5. Plagiarism Compliance Certificate
6. Acknowledgements
7. Table of contents
8. List of tables
9. List of graphs, charts, symbols etc…

Main part – (i.e. Chapters)

- Introduction (Chapter 1)
- *Chapters* (Numbered consecutively from 2 to *X-1*)
- Conclusions (Chapter X)

Back Matter
- Bibliography
- Certificate for the completion of course work
- Certificate for participation/presentation in two (02) national/international conferences
- Proof of acceptance/publication of two (02) research papers in refereed journals
- Certificate for the successful completion of the pre-submission colloquium
- A copy right certificate
- Plagiarism Certificate
- Glossary *(optional)*
- Appendices *(optional)*

Main Part Expanded Version
(Chapter scheme may vary from candidate to candidate depending upon the research problem)
Chapter 1: Introduction:

must include problem statement, need for the study, scope of the study, objectives of the study, hypothesis (if any), a brief on the methodology adopted (sample design, data source, tools and techniques for data collection and analysis of data), plan for analysis and limitations of the study

Chapter 2: Profile/Background of Study:

includes the review of the extant literature, theoretical framework if any, and if they are company projects then the profile of the company must be spelt out: for freelancing projects this chapter would be called 'Profile of (Sector Name)' and would include sector history, milestones, nature of the businesses, products and services, major players, major customers etc., whereas for the company project this would be called 'Profile of (Company Name)' and would contain an introduction to the sector (history, milestones, nature of the businesses etc) followed by an introduction to the company (history, milestones, products and services, organization structure, competitors and major customers etc.)

Chapter 3: Data Analysis and Interpretation:

This chapter will provide an analysis of the data with an appropriate interpretation. Tables, charts and graphs are to be used wherever necessary. Inferences are to be drawn from the interpretation.

Chapter 4: Summary of Findings, Conclusions and Recommendations:

This chapter begins with an overview of the Thesis/Dissertation and findings are summarized under each objective and a conclusion is provided to elaborate on the Thesis/Dissertation learning experience. Future orientations of the research, as well as Limitations of the research and suggestions are based on the findings and the recommendations are expected to be practical, acceptable and comprehensive.

References and Citations:

References are recorded in, and follow, the Harvard Referencing System. Sources written in languages other than English should be translated into English and scholars should indicate the language in which this reference is originally written in parentheses.

References should be listed in alphabetical order starting with the surname of the (first) author or the (first) editor, or with the name of the corporate author (e.g. European Commission) or periodical if there is no individual author or editor. Several publications by an identical author (or group of authors) should be ordered by ascending year of publication. If the years of publication are also the same, differentiate entries by adding small letters ("a", "b", etc.) after the years (e.g. 2011a). The phrase "*et al.*" is used when citing a reference of three or more authors.

The way the references should be written is presented below:

For articles published in academic journals/periodicals:

- **Liu, D., Mitchell, T.R., Lee, T.W., Holtom, B.C. and Hinkin, T.R., 2012.** When Employees Are Out of Step with Coworkers: How Job Satisfaction Trajectory and Dispersion Influence Individual- and Unit-Level Voluntary Turnover. *Academy of Management Journal*, 55(6): 1360-1380.

  <u>Citation:</u> …(Liu *et al.*, 2012) **or** According to Liu *et al.* (2012)…

  (2006b)…

For books:

- **Brealey, R. and Myers, S., 2003.** *Principles of Corporate Finance* (7th ed.). New York: McGraw-Hill.

  <u>Citation:</u> …(Brealey and Myers, 2003) **or** According to Brealey and Myers (2003)…

For book chapters (in edited volumes):

- **Decker, S. and Sale, C., 2010.** An Analysis of Corporate Social Responsibility, Trust and Reputation in the Banking Profession. In Idowu, S.O and Leal Filho, W. (Eds.), *Professionals' Perspectives of Corporate Social Responsibility*: 135-156, Berlin: Springer. <u>Citation:</u> …(Decker and Sale, 2010) **or** According to Decker and Sale (2010)…

The Role Pre-Thesis Submission Colloquium:

The University will organize a Pre-Thesis submission Colloquium in the presence of the Doctoral Committee formed for the candidate. The role of the Pre-Thesis Submission Colloquium is to help and guide the scholar in on the short comings of the study and also to provide guidance and advice during the writing of the Thesis/Dissertation. The supervisor should regularly comment, correct and improve the Thesis/Dissertation text submitted by the scholar, and provide guidance and advice regarding elaboration on the Thesis/Dissertation. The role of the subject expert is to comment on the structure of the final Thesis/Dissertation and to suggest improvements. If the Doctoral Committee is not satisfied with the Pre-thesis Submission Colloquium of a candidate, it may ask the candidate to re-appear for the Colloquium after a gap of three months with proper preparations.

Thesis/Dissertation Presentation:

The candidate needs to present his/her work before the Doctoral Committee constituted for the respective candidates:

The length and depth of the examination is proportional to the type of the work made, which means that the presentation might have duration of more than one hour. In the first part, the candidate presents his/her work to the committee, it is expected that this work be supported by audio-visual and reading material.

The second part of the procedure consists of questions asked by members of the committee which must be answered satisfactorily. After the oral presentation the members of the committee may ask scholar to make corrections or amendments. In such a case, the scholar must then submit the final version of Thesis/Dissertation as per committee advice.

Evaluation:

The Vice-Chancellor shall appoint two examiners out of whom at least one examiner shall be from the said panel. He shall be free to select any other examiner either from the list of the subject experts of the UGC or on his own initiative. The thesis submitted by the candidate shall be examined by these two examiners. At least one of the examiners shall be from outside the State/Nation. It shall be open to the University to appoint an examiner from outside the country.

Viva-Voce Examination:
After receipt of the positive reports from both the examiners, an open Viva-Voce examination shall be conducted by the University on any working day by a Board constituted by the Registrar (Evaluation) based on the approval of the Vice-Chancellor.

The CMRU Plagiarism Policy:
The Process of Identification of Plagiarism at CMRU includes the following steps to make the Ph.D Thesis free from plagiarism to maintain the academic integrity and standards

- ✓ The student or research scholar will submit his or her draft copy of dissertation or thesis to the University in soft copy (CD format) after the completion of their work.
- ✓ The University will check for plagiarism through a licensed software
- ✓ Send the plagiarism report to the candidates and supervisors for corrections. If any.
- ✓ A candidate can submit his/her hard copy dissertation/thesis only after getting clearance from the plagiarism check.
- ✓ The permitted similarity index at **CMRU is <=10%** including references and bibliography
- ✓ The candidate will get a maximum of three chances to submit and resubmit the Thesis after which shall not be accepted.

Final check list of the Thesis/Dissertation:

When the writing of the Thesis/Dissertation is complete, it is important to check it for mistakes or omissions. An illustrative checklist is the following:

1) Is the topic of the Thesis/Dissertation well described in a clear and concise manner for the reader?
2) Is the purpose of the Thesis/Dissertation accurately communicated to the reader?
3) Are there coherent connections between the different chapters and sub-chapters?

4) Is the method or methodology or the model that was used based on theory which is suitable for solving the problem that the Thesis/Dissertation deals with? Are there any points that are not substantiated?

5) Are the conclusions carefully thought out and presented or do they seem pedantic?

6) Do the conclusions and the research findings (if there is any research study) correspond to the purpose of this work?

7) Is the Thesis/Dissertation well-written?

8) Is the Thesis/Dissertation properly formatted using all appropriate document conventions (e.g. font sizes, numbering, etc.)

9) Are the figures, diagrams and charts reported and commented in the text? Are there relative sources, whenever are needed?

10) Have you acknowledged the work of others by using proper citation and referencing in your Thesis/Dissertation?

11) Are the references relevant to the content of the Thesis/Dissertation? Are they written according to the examples given in this handbook?

12) The thesis submitted for the award of Ph.D must be free from plagiarism.

13) Five hard copies along with a soft copy (CD) of the thesis shall be submitted.

FRONT PAGE LAYOUT OF THESIS:

One of the most important requisites in preparation of the Thesis is consistency of format and adherence to the specific instructions given below.

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ADIPISCING ELIT.

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A Thesis

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Submitted by

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AUTHOR

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Registration Number:

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in partial fulfilment for the award of the degree of

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DOCTOR OF PHILOSOPHY

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Under the Supervision of

Name of the Supervisors

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Supervisor 1

Supervisor 2

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BANGALORE – 560 043. KARNATAKA. INDIA.

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MONTH – YEAR <Font Size 14>

ANNEXURE –I

(A Typical Specimen Table of Contents-Font Style Times New Roman, Font Size 14)

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