

NANYANG TECHNOLOGICAL UNIVERSITY
School of Mechanical and Aerospace Engineering

Guidelines for MSc Dissertation-MSc Project Management

FORMAT

1. The Dissertation must meet international standard in terms of quality. The Dissertation should be printed in English, in the third person and with one and a half or double spacing between lines. There is no prescribed length to the Dissertation; however a good guide would be around 60 to 100 pages in **Times New Roman font size 12**, in the range of **12,000-15,000** words excluding charts, diagrams, appendices, tables, references etc.

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2. The contents of the report should be presented in the following order:
 1. Title page
 2. Statement of Originality
 3. Supervisor Declaration Statement
 4. Authorship Attribution Statement (Select Option A only; Delete Option B)
 5. Intellectual property and Copyright
 6. Abstract of the Dissertation (no more than one A4 page)
 7. Acknowledgment page to give recognition of any advisory or financial assistance received in the course of the work on which the report is based (no more than one A4 page)
 8. Table of contents
 9. List of figures (if any)
 10. List of tables (if any)
 11. List of symbols (if any)
 12. Introductory chapter of the Dissertation
 13. Text chapters of the Dissertation
 14. Conclusions
 15. References
 16. Appendices

3. Please [click here](#) to download and include the endorsed Declaration Statements (Point 2 - Point 4) Delegates on the Joint MSc PM Programme should insert the following statement onto a separate page and add to the front of their final dissertation: (Point 5 mentioned above)

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4. White A-4 size bind paper of at least 80g wt should be used.
5. The same type setting should be used in the main text of the report to ensure that the letters do not vary in size, type and shade. One and a half or double line spacing should be used for the text of the report.
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The hardcover binding should be standardized. A dark blue hard cover is required. If in doubt, ask your supervisor for a sample of past hard bound Dissertation.

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 - The title and author's name must be given in block letters on the cover of the Dissertation.
 - The title or an abbreviation thereof and the author's name must be given on the spine of the Dissertation.
 - The Dissertation must be bound in dark blue with gold lettering not exceeding 16 pts.
 - Pages must be numbered in one continuous sequence in Arabic numerals.
- Where a Dissertation consists of more than one volume, one numbering sequence must be used.
 - **One hard-bound copy** should be submitted to MAE Graduate Studies office.
7. Samples of the cover and spine, title page and table of contents, as well as an extract on the method of listing references, are attached in Appendices 1, 2, 3 and 4 respectively.

STANDARD OF WRITING

The Dissertation should be logically laid out. The writing should be grammatically correct, clear and concise English. **You should not expect your supervisor to correct errors in the use of English**; if you need some help in this regard, there are many books in the NTU library (in the section with top level call number T11) providing guidance on writing technical reports; a few of them are given in the **Reference** [1-4].

Your supervisor will offer you advice and guidance through the dissertation period and also try to help you to deal with any problems affecting your work.

Any attempt to provide guidance or feature common errors here will run into many pages. So we will refrain from doing that except to say one thing: if a word (or phrase or sentence) can be deleted without changing the meaning of what you want to say, then delete it.

All figures and tables should be numbered sequentially, chapter by chapter, and be given a caption. Each must be referred to in the main text, and wherever possible appear near to where it is referred to.

CONTENTS

First and foremost, the contents of your work must be relevant to the MSc Project Management Programme you are pursuing. This section describes the general areas which a Dissertation should address. The sample Contents page in Appendix 3 gives a good summary on these areas.

1. **Abstract:** The dissertation abstract is simply a brief summary of the results or findings of the dissertation research. By summarizing the results of the research, it should allow the reader to get an idea of what was accomplished without having to read through the entire dissertation. As such, it is important that the abstract covers all of the important parts. It is difficult to accomplish this while limiting the length of the abstract to one page, but through the use of clear, concise writing virtually any topic can be summarized into one page. This short (not more than 300 words) statement should emphasize the major observations and deductions of the research rather than the methods. It must be designed to be read independently of the rest of the dissertation and should provide enough information about the results of the research that examining the full dissertation is not necessary. References to the dissertation and other literature will not normally be included in the abstract.
2. The first chapter of the Dissertation is almost invariably the **Introduction**. Generally, its purpose is to lead the readers into the problem you intend to attack in the project, to set the scene. The main points here consist of the **background** to the problem definitions and your *motivation* in solving it. This then leads into the **objectives** and the *scope* of the project. It is good to conclude with your Introduction a section on the *layout* of the Dissertation. It prepares the readers for what is to come.
3. Then comes the main part of your work. To lay the ground, there should first be a chapter on what has been done before on the problem - a **Literature Review**. This is an important section because it shows that you do not narrowly focus only on what you do, but are aware of the related work elsewhere, some of which might be instructive to your solving of the problem. It can also explain why you are taking this direction.
4. The next few chapters should describe the work you have done in tackling the problem. There might be a chapter on the fundamental theories relevant to the solution you are pursuing, or the supporting technologies you need in implementing the solution. Then, there should be a chapter on the solution itself, followed by a chapter on the results and analysis of the results.
5. The last chapter is always the **Conclusion**. This generally should have the following parts. The first is a concise summary of the work you have done. In a way, this is similar to the abstract. Then there is the conclusion, in which you highlight the significance of the results, and perhaps the consequences of the results, critically where necessary. An important part of your dissertation is the set of recommendations arising from your work. Every study, no matter how well it is conducted and constructed has limitations. You are required to identify the limitations of your work and suggest how it could be extended in future research.
6. Generally, the Dissertation may have six or seven chapters. If you have more than that, you should take a close look at its organization and see if certain chapters can be merged.

REFERENCES

- [1] *A Guide to Report Writing*, School of Mechanical and Production Engineering, Nanyang Technological University, 1994. (Library call number T11.G946.)
- [2] Blake G. and Bly R.W., *The Elements of Technical Writing*, MacMillan, 1993. (Library call number: T11B661.)
- [3] Blicq R. S., *Technically-Write*, Prentice-Hall, 1992. (Library call number: T11B648.)
- [4] Turk C. and Kirkman J., *Effective Writing*, E & FN Spon, 1989. (Library call number: T11T939.)

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PROJECT MANAGEMENT

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**THE BENEFITS AND CHALLENGES
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SCHOOL OF MECHANICAL & AEROSPACE ENGINEERING

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THE BENEFITS AND CHALLENGES OF AGILE PROJECT MANAGEMENT

ALICE TAN

School of Mechanical & Aerospace Engineering

A dissertation submitted to the joint NTU-UoM degree of Master
of Science (xxxx) in partial fulfillment of the requirement for the
degree of
Master of Science (Project Management)

20XX

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Dissertation must be preceded by the following:

- Title Page
- Declaration (for joint submission only)
- Acknowledgements
- Table of Contents
- Summary

The format summary:

- White A4 Size bond paper of at least 80wt
- Times New Roman font size 12
- 3.7cm margin on the left hand side and 3cm on the top, bottom and right hand sides of each page
- The same type setting and the letters do not vary in size, type and shade
- One and a half or double line spacing
- 60 to 100 printed pages

APPENDIX 2: SAMPLE OF CONTENTS PAGE

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APPENDIX 3: EXTRACT FROM A DISSERTATION

Chapter Six

6.1 SUPPLEMENTARY ELEMENTS

The supplement elements consist of the List of Reference and the Appendices.

6.2 References

Documents that are prepared with the help of other sources should have a list of sources cited. A list of references contains only sources the writer quotes directly, takes original ideas from, and refers to in the Dissertation. In reports where the subject is primarily scientific, the list of references is the most widely accepted way to cite specific sources.

6.2.1 Listing of references

Details of reference which are cited in the text are listed at the end of the text. Details given under both APA and Numbered References Methods are similar but the order in which references are listed is different.

6.2.1.1 APA author/year system

In the APA author/year system, the entries are arranged alphabetically by the surname of the author.

6.2.1.2 Numbered references method

The Numbered References Method uses an Arabic numeral as internal citation. The numeral refers to the entry in the list of references. The entries in the list of references are arranged by order of their appearance in the text. Many technical journals have adopted this method for ease in printing. (It is more economical to print one number rather than many names and dates). This method is also commonly used in short technical reports that have only 2 to 3 references. The difficulty with this system is that if a new source is inserted in the list, all the entries in the list and references in the text need to be renumbered.

6.2.1.3 Entries in the List of References

The format for the entries in a list of references is as follows:

- i) With the APA Methods, arrange all entries in alphabetical order. Determine the alphabetical order by the author's surname or, if no author is listed, by title, disregarding the, a, or an.
 - ii) With the Numbered References Method, number each entry according to its order of appearance in the report. The format of entry, listed below, is the same for both the APA Method and the Numbered References Method.
1. In a single-author entry, list the author's name in the following order: surname, first, middle name or initial. In multiple-authors entry, list the subsequent authors' names in

reverse order, e.g. Wang, Henry.

2. The year of publication should follow the author's name and precedes the title.
3. Insert periods between the basic components of author, title, and facts of publication.
4. For articles and books capitalize only the first letter of the title and subtitle and proper nouns. Use standard title capitalization for periodicals, i.e. capitalize the first letter of every word except conjunctions and articles. Title of books or periodicals should either be underlined or printed in Italics.
5. Omit page numbers from book entries. In periodical entries, however, give inclusive page numbers for each article.

Examples:

Entries with one author:

Cleland, D. I. 1991. Product design teams: The simultaneous engineering perspective. *Project Management Journal*, 22(4), 5-11.

Pinto, J. K. 2007. *Managing Successful Projects*, Boston, MA: Prentice-Hall.

Martin, Jacob. 1988. Slender body oscillation under simulated atmospheric boundary layer condition. *Engineer Digest* 52 (19): 112 - 116

Entries with two authors:

Kim, B. C., and Reinschmidt, K. F. 2011 . Combination of Project Cost Forecasts in Earned Value Management, *Journal of Construction Engineering and Management*, 11: 958 - 966.

Nellis, J. G. and Parker, D. 1997 *The Essence of Business Economics* 2nd ed. Essex, Prentice Hall.

Percy, K. E., and Grant, S. A. 1987. A multivariate analysis of element concentrations in sphagnum magellanicum brid. in the Maritime Provinces, Canada. *Water, Air, and Soil Pollution* 25 (July):33-38.

King, R.W., and Magid, J. 1982. *Industrial hazard and safety handbook*. London: Butterworth Scientific.

Entries with three authors:

Rudnic, E.M., Chan, J. L., and Rhodes, C.T. 1987. Effect of molecular variation on the disintegrant action of sodium starch glycolate. *Journal of Pharmaceutical Sciences* 72(6): 345-57.

Lipke, W., Zwikael, O., Henderson, K. and Anbari, F. 2009 Prediction of Project Outcome: The Application of Statistical Analysis Methods to Earned Value Management and Earned Schedule Performance Indexes, *International Journal of Project Management*, 27(4): 400 -

407.

More examples:

Corporate Author:

Alphabetize corporate authors by the first significant word. When the author and publisher are the same, use the Author for the name of the publisher.

National Broadcasting Company. 1989. Heat transfer mechanism - New York: Author.

Book without an author or editor:

Alphabetize a book with no author by the first significant word in the title; in this case uniform. A uniform system of citation. 1988. Cambridge, MA: Harvard Law Review Association.

Symposium Paper Published in Conference Proceedings

Mulik, P. R. 1981. High-temperature removal of alkali and particulates in pressurized gasification systems. Paper presented at the American Society of Mechanical Engineers Conference, March 9-12, 1981, Houston, Tex. ASME Paper No. 810GT-67.

Public Document

U.S. Environmental Protection Agency. Office of Research and Development. 1979. *Energy alternatives and the environment*. EPA-600/9-80-009.
(The acronym and set of numbers are an access code for the document, should you want to order and read it.)

Dissertation

Mann, E.A. 1988. An economic application of engineering principles, Ph.D. diss., University of California, Berkeley.

Personal Communication, Interview, or Lecture

Fisher, S. Professor of Physics, Quantum University. Letter to author, 16 February 1987 / (1987, February 18). Fisher, S. Interview with author, 16 February 1987 / (1987, February 16). Stittles, N. Physics 233 Lecture, 22 March 1986 / (1986, March 22).

Unpublished Lab Report, Log, Etc.

Markham, N.E. 4 April 1987. Robotics: Imitating the human thumb. Submitted to Dr. R. Roper, Computer Engineering 255, West Virginia University.

Questionnaire

Follow-up study on lay-offs at EFFE, Inc. July 1985. Data derived from questionnaires administered to 65 laid-off Technicians, in Shanghai, China.

Information Derived from a Database Service

Benum, P., et al. 1977. Manufacturing information system for the production of centrifugal pumps. Engineering Plus 48(2):150-57. DIALOG, INDEX MANUFACTURE, item 129357577198585.

Article in an Anthology

- Capitalize only the first word of the essay title
- Use zip code abbreviations for states

Roberts, G. and Kates, M. 1988. Digital processing in audio signals. In B.C. White (ed.), Applications in digital sound processing. Englewood Cliffs, NJ: Prentice-Hall, 29-100.

6.3 Appendix

The appendix contains related data not necessary to the immediate understanding of the discussion in the report. This may contain materials such as: tables, graphs, illustrations, description of equipment, samples of forms, data sheets, questionnaires, equations, and any material that must be included for record purposes.

Each entry (sample forms, detailed data for references, tables, pictures, questionnaires, charts, maps, graphic representations) in the appendix requires an identifying title. Every entry in the appendix must be referred to in the body of the report. Each appendix must be lettered, beginning with Appendix A. The list of appendices should be appearing in the table of contents following the list of references entry.