GUIDELINES FOR PREPARING FINAL YEAR PROJECT REPORT

1. Appearance

1.1 Paper

High quality 80 gm A4 paper shall be used. The paper should be white in colour, acid free and non-erasable' kind.

1.2 Type of Machine/Software

Students are encouraged to use a personal computer (PC) to write their final year project report. Near-letter quality impact printers or laser-jet printers may be used, however, dot-matrix printers and ink-jet printers are not acceptable. Any word processing software such as Microsoft Word or WordPerfect would be suitable to write the final year project report. Students may also use Microsoft Excel, Lotus 123 etc. for any tables, calculations or any other applications.

1.3 Font Size

The basic text should be in “Times New Romans” of font 12 point. However, 10 point font size may be used for footnotes, captions, figures, tables and other print outside the basic text.

1.4 Font Style

Only one font style may be used throughout the entire final year project report, including the title-page, signature page, acknowledgement, bibliography and appendices. Exceptions to this can only be made for tables/ figures/ illustrations imported from other sources. Italic variants of the font style may be used for headings, labels, foreign words, book titles or occasional emphasis. The usage of bold variants
of the same font style and understanding in the text of headings and titles is at the student’s discretion.

1.5 Line Spacing

The line spacing should be generally set at 2.0 (double spacing). Single spacing may be used only in the following cases:

a) Acknowledgments
b) Tables of Contents, as long as there is double spacing between entries of two chapters and/or other major sections such as Bibliography and Appendices.
c) List of Tables/ Figures/ Illustrations/ Cases
d) Abstract
e) Quotations set off from the text, of more than 40 words and indented eight spaces in from left and right margins.
f) Captions of figures and Tables.
g) Footnotes
h) References
i) Index

1.6 Headings

Chapter headings are to be centered and written in (bold) capital letters. The maximum size acceptable for Chapter Headings is 14 point. Other sub-headings are to be aligned to the left margin and should be of 12 point in size. The use of capital or small letters, underlining and boldfacing in the sub-headings is at the student’s discretion.

1.7 Paragraphs

Spacing between two paragraphs should be set at 4.0 points. The first sentence of a paragraph should be indented to 1.25 cm. A Heading that appears as a last line on a page will not be accepted. There should be a minimum of two lines of a paragraph at the bottom of the page under the Heading.
1.8 Binding

The first submission of the final year project report manuscript for evaluation and examination purposes should be in temporary binding. Hole-punching and spiral binding of the manuscript may be acceptable for temporary binding.

Final submission of the final year project report must be in permanent hard-cover binding. Information printed on the cover and the spine must be with good-colored letters of between 18 and 24 point size. The color of the cover must be black.

2. Format/Layout

2.1 Margin

When typing the original manuscripts, the following margins should be observed (also please refer to the sample in the appendices):

<table>
<thead>
<tr>
<th>Margin</th>
<th>Requirement</th>
</tr>
</thead>
<tbody>
<tr>
<td>LEFT</td>
<td>3.8 (This margin is wide for binding requirements)</td>
</tr>
<tr>
<td>TOP</td>
<td>2.5 cm</td>
</tr>
<tr>
<td>RIGHT</td>
<td>2.5 cm</td>
</tr>
<tr>
<td>BOTTOM</td>
<td>3.0 cm</td>
</tr>
</tbody>
</table>

Excepting from page numbers, all other manuscripts material must fit within these margin requirements (including tables, figures, graphs, etc.).

2.2 Page Numbering

Every sheet of paper in the manuscript except the title page must be numbered. The title page is 'i' but not numbered. Preliminary pages (all pages before the body of the text) such as abstract, acknowledgments and table of contents are to be numbered in lower case Roman numeral (ii, iii, iv, etc). The main text pages are to be numbered in Arabic numerals (1, 2, 3, etc) and all pages must be numbered.

The page number must be centered to the text, not to the page and must be placed at the bottom of the page. Since the bottom margin is 3.0 cm, the page number must appear 1.3 cm from the bottom of the page. No dashed, periods, underlining or other marks should appear before, after or under the page number.
2.3 Justification

The final year project report must be fully justified (i.e. have even left and right-hand margins).

2.4 Figures and Tables

All figures and tables should be placed after their first mention in the text. Figure caption should be below the figures while table caption should be above the table. They should be referred in the text, for example, Fig. 1, or Fig. 1-3.

![Figure 1](image.png)

Fig. 1 The caption should be placed after the figure

Tables and figures must face out of the binding edge, the 3.8 cm (left) margin then being at the top of the installation. Illustration, tables, or figures requiring more than one page should have the number of caption and the “continued” at the top of each additional page. For example Table 3 (continued).

Table 1 The caption should be placed before the table

<table>
<thead>
<tr>
<th></th>
<th>A</th>
<th>B</th>
<th>C</th>
<th>D</th>
</tr>
</thead>
<tbody>
<tr>
<td>(1)</td>
<td>0.279</td>
<td>0.312</td>
<td>-</td>
<td></td>
</tr>
<tr>
<td>(2)</td>
<td>1.68</td>
<td>0.168</td>
<td>0.025</td>
<td></td>
</tr>
</tbody>
</table>

2.5 Symbols, Units and Equations
Symbols or nomenclature used shall be defined. Standard symbols or acronym normally accepted in engineering can be used. International system unit (SI) shall be used.

Equation number should be Arabic numerals enclosed in parentheses on the right-hand margin. They should be cited in the text, for example, Eq. (1) or Eqs. (1)-(3). Equations start from the left. Punctuate equations with commas or periods when they are part of a sentence. For example,

\[
\begin{align*}
\dot{x} &= Ax + Bu, \\
y &= Cx + Du.
\end{align*}
\]  

(1)  

(2)

2.6 Oversize Material

The margins given in these guidelines are to be observed for all oversize, illustrative, and special material described in the following paragraphs:

a) Reducing Oversize to Standard Requirement Margin

A copy that has been reduced on photocopying machines to fit within required margin for the 8 1/2 x 11 inch page must be legible. Usually, the earliest method is to reduce material to the appropriate size, trim the page, and mount it on a separate page to fit within the required margins. This “pasted up” version serves as the original, from which the copy is made for filing.

b) Oversize Material to be Folded

Some oversized material cannot be reduced to standard-page margin requirements, and must be submitted on a larger-than-standard page. Paper measuring 11 x 17 inches may be included in the manuscript by converting the page to manuscript size with pleat-like folds. With these pages, the left (11 inch) will have a 3.8 cm margin, the right (17 inch) will have a 3.0 cm margin, and the top and the bottom will have a 2.5 cm margin. The page number is placed 1.3 cm from the bottom edge of the page, and about 10 cm from the right side paper edge. The folds of the 17 inch wide paper must be at least 3.0 cm from the edges of the page to assure that the illustration is not cut when the edge of the page is trimmed in the binding process. When the oversized page is properly folded, the page number will appear
in the position where it appears on the standard-size page. When submitted, the oversized page must be one continued sheet, with nothing glued or taped.

2.7 Photographs

Photographs may be attached in any of the following ways:

a) Students may submit a page with an actual photograph, if the image size conforms to the margin requirements.

b) If the photograph is smaller than A4 size, students may paste the photograph on a standard sheet of paper, according to the margin requirements, and photocopy it in black & white or in color, as appropriate. Pasted-up pages, however, will not be accepted. High quality and high contrast photocopies must be made of any photographic material.

c) Students may also use high resolution scanners to scan photographs and reprint them as required through a suitable computer software. In this option, the size of the photographs, margins, color and contrast etc. may be adjusted according to the requirements.

2.8 Slides, Diskettes, CD ROMs, Video or Audio Cassettes

Students may also submit with the final year project report, any of the above items. Slides, video and audio-cassette recordings must be clear and sharp. All items must be appropriately labeled and must bear the name of the author, title of the final year project report, name of the degree and the year. The inclusion of any of the above items must be indicated in the final year project report, and under the section where lists of all Tables, Illustrations etc. are given.

3. Arrangement and Contents

3.1 Arrangement

The contents should be arranged in the following order:

a) COVER & SPINE
b) TITLE PAGE  
c) ABSTRACT  
d) ACKNOWLEDGEMENTS (optional)  
e) TABLE OF CONTENTS  
f) LIST OF TABLES  
g) LIST OF FIGURES  
h) LIST OF SYMBOLS/ABBREVIATIONS/TRANSLATIONS, ETC. (optional)  
i) BODY OF THE TEXT  
j) REFERENCES  
k) APPENDICES (optional)

3.2 Cover and Spine

a) Cover  
The information printed on the cover page should include the following information exactly in the given order (Please see Appendix A):

- The TITLE of the final year project report appears at the top of the cover. It should include meaningful keywords descriptive of the subject and the content.

- The NAME of the student used on the cover, must be the same under which the student is registered at IIUM. Matric Number of the student should appear following the name of the student.

- The LOGO of IIUM.

- NAME OF DEPARTMENT should appear in the next line

- KULLIYYAH OF ENGINEERING should follow the name of the department.

- INTERNATIONAL ISLAMIC UNIVERSITY MALAYSIA appears in full capital letters at the bottom of the page.

- The MONTH and YEAR of Submission should appear on the next line.

The title of the final year project report will be in 18 point and the other texts will be in 14 point font size. The top and bottom margin for the cover page must be 6 cm. All information printed on the cover must be justified centered.

If the final year project report exceeds 6 cm in thickness, then the binding should be done in two different volumes. In this case the volume number should be printed in
Arabic Numbers under the title of the final year project report, for example, Vol. 1 or Vol. 2.

b) Spine

Information printed on the spine must be with gold-coloured letters of between 18 and 24 point font size, and must be in the following order (please refer to appendix B):

- Name of the author
- Volume number (if more than one volume)
- Acronym of the name of the degree
- Month, Year, i.e. like 2001
- Acronym of the University i.e. IIUM

The top and bottom margin of the spine should be 5 cm. If a final year project report is more than one volume, the volume number should be printed in Arabic digits in the center of the spine.

3.3 Title Page

The information printed on the title page should include the following information exactly in the given order (Please see Appendix C):

- The TITLE of the final year project report appears at the top of the cover. It should include meaningful keywords descriptive of the subject and the content.
- The NAME of the student used on the cover, must be the same under which the student is registered at IIUM. Matric Number of the student should appear following the name of the student.
- The SUPERVISOR NAME.
- The LOGO of IIUM.
- A REPORT SUBMITTED IN PARTIAL FULFILMENT OF THE REQUIREMENTS FOR A DEGREE OF BACHELOR OF ENGINEERING (B. ENG.) IN NAME OF DEPARTMENT should appear in the next line.

The title of the final year project report will be in 18 point and the other texts will be in 14 point font size. The top and bottom margin for the cover page must be 6 cm. All information printed on the cover must be justified centered.
3.4 Abstract

The heading of ABSTRACT appears centred and in full capital letters beneath the top margin (See Appendix D). The abstract consists of
- a brief description of the problem
- a brief description of the methods or procedures used
- a condensed summary of the findings of the study
The length of the abstract should be about 250 words, the maximum being 500 words.

3.5 Acknowledgements

Acknowledgements should be double-spaced under the heading ACKNOWLEDGEMENTS. This section may include appreciation of all those who assisted the author in the preparation of his/her final year project, particularly the supervisor(s). Please see Appendix E.

3.6 Table of Contents and Lists of Figures/Tables/Symbols

A table of contents (TOC) shows readers the starting page number of each major section and subsection in the report (see Appendix F). The topics to be covered in the report must be carefully selected and organized. The flow of the topics to be presented is very important in order to guide a relatively novice reader in understanding the whole report. To an experienced reader, the TOC gives a quicker way of finding the interested information.

With the similar purpose as the TOC, the lists of figures/tables/symbols is to enable readers to find the illustrations, diagrams, charts, tables and symbol explanation in the report. Figures/tables must be numbered consecutively in order of appearance (see Appendix G, H and I).

3.7 Body of the Text

The MAIN BODY TEXT should normally be divided into chapters such as (See Appendix J):
- Introduction
• Theoretical Background or Review of Literature
• Method of Investigation or Detailed of the Design
• Presentation of Data/Simulation/Testing
• Discussions/Evaluation on Findings/Design
• Conclusions and Recommendations

a) Introduction

An introduction is necessary to give a background, an overview of the overall topic and the objectives of the final year project. The motivation to the initialization of the project can be included. Its content should be general enough to guide the reader gracefully into the subject materials.

b) Theoretical Background or Literature Review

This section is to discuss the theoretical aspects leading to the implementation of the project. Typically, this involves the historical background of the theories published in the research literature and the questions or ambiguities arose in these theoretical works. Citations for the sources of information should be given in the standard bibliographic formats (using square brackets with the corresponding number [1] that points to the List of References).

Explore this background to prepare the readers to read the main body of the report. It should contain sufficient materials to enable the readers to understand why the set of data are collected, and what are the salient features to observe in the graph, charts and tables presented in the later sections. Avoid reporting any irrelevant issue. Depending on the length and complexity of the report, the introduction and the theoretical background may be combined into one introductory section/chapter.

c) Theoretical Background or Literature Review

The project may be in one of the following nature:
• Experimental Research
• Design synthesis of hardware/software
• Development and application of theory

Depending on the nature of the project, the approach can be described in one or more chapters. For experimental research, explanations shall be given with regard to the
equipment used to conduct the experiment, the function of each apparatus, how the configuration works to perform a particular measurement, sources of errors and how to minimize them, materials and ways to produce the sample. For design synthesis of hardware/software, detailed descriptions on the techniques used shall be given.

For development and application of theory to solve a particular problem, the techniques used shall be explained in detail. Mathematical derivations that are too lengthy shall be given in appendices. Experiments conducted to verify the theory shall also be documented.

d) Presentation of Data

The data should be organized and presented in the forms of graphs, charts, or tables in this section, without interpretative discussion. Raw data which may take up a few pages, and most probably won’t interest any reader, could be placed in the appendices.

e) Discussion on Findings

The interpretation of the data gathered can be discussed in this section. Sample calculations may be included to show the correlation between the theory and the measurement results. If there is any discrepancy between the theoretical and experimental results, an analysis or discussion should follow to explain the possible sources of error. The presentation of data and the discussions may also be combined into one chapter.

f) Conclusions and Recommendations

The conclusion section closes the report by providing a summary to the content in the report. It indicates what is shown by the work, what is its significance, and what are the advantages and limitations of the information presented. Additional discussion shall not be added. The potential applications of the results and recommendations for future work may be included.
3.8 References

Every reference quoted or cited in the report must be included in the list of references and numbered accordingly. Citation is required for statement which expresses a fact that goes beyond the common knowledge of the art. See Appendix H for detail explanation on references.

3.9 Appendices

This section contains lengthy materials which are not suitable to be put inside the main text, for example raw data, equipment and computer programmes.
APPENDIX A: COVER PAGE OF REPORT

TITLE OF THE FINAL YEAR AND CONTROL

AUTHOR NAME  MATRIC NO

NAME OF DEPARTMENT
KULLIYAH OF ENGINEERING
INTERNATIONAL ISLAMIC UNIVERSITY MALAYSIA
MONTH YEAR
APPENDIX C: TITLE PAGE OF FINAL YEAR REPORT

DATA ACQUISITION, PROCESSING AND CONTROL

ANISA ZAIB BIN MUHAMMAD 0028079

A REPORT SUBMITTED IN PARTIAL FULFILMENT OF THE REQUIREMENTS FOR A DEGREE OF BACHELOR OF ENGINEERING (B. ENG.) IN MECHATRONICS ENGINEERING
APPENDIX D: ABSTRACT

ABSTRACT

« A short summary of the project emphasising the novelty of the approach adopted, the actual work performed and the important results obtained in preferably one paragraph and no more than 300 words. »
ACKNOWLEDGMENTS

« Give acknowledgment to any advisory or financial assistance received in the course of your work. »
APPENDIX F: TABLE OF CONTENTS OF PROJECT REPORT

<table>
<thead>
<tr>
<th>CONTENTS</th>
</tr>
</thead>
<tbody>
<tr>
<td>ABSTRACT</td>
</tr>
<tr>
<td>ACKNOWLEDGEMENTS</td>
</tr>
<tr>
<td>LIST OF TABLES</td>
</tr>
<tr>
<td>LIST OF FIGURES</td>
</tr>
<tr>
<td>LIST OF SYMBOLS</td>
</tr>
<tr>
<td>CHAPTER 1 « CHAPTER TITLE »</td>
</tr>
<tr>
<td>1.1 « Section Title »</td>
</tr>
<tr>
<td>1.2 « Section Title »</td>
</tr>
<tr>
<td>… … … …</td>
</tr>
<tr>
<td>CHAPTER 2 « CHAPTER TITLE »</td>
</tr>
<tr>
<td>2.1 « Section Title »</td>
</tr>
<tr>
<td>2.2 « Section Title »</td>
</tr>
<tr>
<td>… … … …</td>
</tr>
<tr>
<td>REFERENCES</td>
</tr>
<tr>
<td>APPENDIX A « APPENDIX TITLE »</td>
</tr>
<tr>
<td>APPENDIX B « APPENDIX TITLE »</td>
</tr>
<tr>
<td>… … … …</td>
</tr>
</tbody>
</table>
APPENDIX G: LIST OF FIGURES IN PROJECT REPORT

LIST OF FIGURES

Fig. 1 « Figure Caption » «Page no.»

Fig. 2 « Figure Caption » «Page no.»

... ... ...
APPENDIX H: LIST OF TABLES IN PROJECT REPORT

LIST OF TABLES

Table 1 «Table Title» «Page no.»
Table 2 «Table Title» «Page no.»

... ...
APPENDIX I: LIST OF SYMBOLS IN PROJECT REPORT

Note that only important symbols need to be included in this list.

<table>
<thead>
<tr>
<th>Symbol 1</th>
<th>Symbol Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Symbol 1</td>
<td>Symbol Description</td>
</tr>
</tbody>
</table>

… … … …

“abbreviation 1” “Expansion”

“abbreviation 2” “Expansion”
APPENDIX K: REFERENCES

In writing references, the titles of books or journals are italicised. The list of references is not classified or categorized according to the type of material e.g. books, journals, newspapers or magazines. References must be written in the manner explained in the following paragraphs:

1. WRITING THE AUTHOR’S NAME

   The name of the author is required to be written in full as printed in the title page of the reference material, or the page where information on copyright is printed.

   In the case of Arab authors, the family name must be placed first, for example:

   Sulayman ibn Ahmad al-Tabrani => al-Tabrani, Sulayman ibn
   Ahead

   In the case of Western authors or other authors who use their family name, students are required to write only the family name in full, whereas other names are to be shortened to the initial alphabets only, for example.
Ronald Brown => R. Brown  
John Fitzgerald Kennedy => J. F. Kennedy

The initials must be written after the family name and a comma (\,\,). For example,

R. Brown => Brown, R.,  
J. F. Kennedy => Kennedy, J. F.,

Other names written in full should be retained. Names using initials are required to be written as in the following example;

Zakri A. H. => Zakri A. H.  
Ton, S. H. => Ton S. H.  
H. M. Ashraf => Ashraf H. M.

2. **ARRANGEMENT OF REFERENCES**

   a) List of references should be in alphabetical order of the authors name.

   b) Reference of a single author will be placed before the reference of the same author, if he/she is a co-author, for example;

   \[
   \text{Ahmad Abdul Karim. 1990} \ldots \\
   \text{Ahmad Abdul Karim & Khalid Abdullah. 1990} \ldots
   \]

   c) If the first co-author of a reference material is the same, then the list will be alphabetically arranged according to the name of the second author, example,

   \[
   \text{Ikram M. Said, Goh, B.L. & Chai, S.T. 1990} \ldots \\\n   \text{Ikram M. Said, Laily Din, Shamsuddin, M.W. 1989} \ldots
   \]

   d) Reference material written by the same author will be arranged according to the year of publication, for example;

   \[
   \text{Osman Hamid, } 1 \text{ 987} \ldots \\
   \text{Osman Hamid, 1988} \ldots
   \]

   e) Reference material written by the same author and published in the same year will be alphabetically arranged according to title of the reference material. An alphabet in lowercase will be added to the year, in proper order, for example;

   \[
   \text{Shuaib Ahmad. 1985a. Aspects of …} \\
   \text{Shuaib Ahmad. 1 1985b. Contemporary …}
   \]

   f) Reference of two authors having the same name is alphabetically
arranged according to the father's name or the initials of the author. For example:

Abdul Razaq bin Hamdar. 1990.....
Abdul Razaq bin Saleh. 1989....
Eliot, A.L. 1993....
Eliot, G.E. 1989....

3. WRITING A COMPLETE REFERENCE OF BOOKS

Information on references should be provided as follows, in the exact order:

Name of author(s), full-stop
Year of publication (according to both Gregorian and Muslim calendar). full stop
Title of the book, full-stop
Editor, Compiler, Translator (if any), full-stop
Name of book series or serial number (if any), full-stop
Edition (not required for the first edition), full-stop
Volume number, full-stop
Place of publication (in case there is more than one place of publication, only the first one should be written), colon
Name of publisher, full-stop

The second line of an entry must begin 1.25 cm (or 6 spaces) from the original margin.

a) Single author


b) Co – authors


c) New editions and reprints


d) **Material known through title**

*Al-Quran*


e) **Compilations of specific Prophetic traditions**


f) **Compilations tcomp. = compiler)**


g) **Edited reference material (edit. = editor)**


h) **Reference materials with more than one volume (vol. = volume)**


i) **Translations (trans. – translator)**

j) **Pen-names**


k) **Monographs**


1) **Chapters in a book (ins. = inside)**


m) **Reference material without year (n.d.)/ place of publication (n.pp)/ name of publisher (n.np) led. - Editor**


