**Project Title**

Project Proposal and Feasibility report submitted in partial fulfillment of the requirements for the

Degree of Bachelor of Science of Engineering

in

The Department of Electronic & Telecommunication Engineering

University of Moratuwa.

Supervisor: Group Members:

----------------------- -----------------------

-----------------------

-----------------------

-----------------------

April 2019

# Abstract

**Project Name**

Group Members: Name 1, Name 2, Name 3, Name 4

Supervisor: Prof. Dr. X

Keywords: Key words related to the project

An informative abstract (length - 1 page) should be included beneath the title, students name, department name and supervisor. The abstract should

1. state the scope and principal objectives of the project
2. describe the current available solutions
3. summarise the novelty
4. state potential benefits

It should not simply list the topics covered in the Undergraduate graduation project report. In preparing the abstract, you should remember that it will be the most widely read portion of the report. The abstract must be able to stand alone as a very short version of the report rather than as a description of it.

Table of Contents

Page

# Abstract ii

# Table of contents iii

# List of Figures iv

# List of Tables v

# Acronyms and Abbreviations vi

# 1 Introduction 1

# 2 Layout of the undergraduate graduation project report

2.1 Margins 4

2.2 Pagination 4

2.3 Use of Word-Processors in Preparing an Undergraduate Graduation

Project Report 4

2.4 Fonts 5

2.5 Paragraphs 5

2.6 Figures, Equations and Tables 5

2.6.1 *An Example of a Figure Layout* 6

2.6.2 *An Example of an Equation Layout* 6

2.6.3 *An Example of a Table Layout* 6

# 3 Bibliographical References

3.1 Introduction 7

3.2 Abbreviations 7

3.2.1 *Example of Use* 7

3.3 Citing References in the Text 7

3.3.1 *Example of Referencing Styles* 7

# List of Figures

1.1. A MCM communications system example 6

# List of Tables

2.1 The table layout style description 6

# Acronyms and Abbreviations

FPGA – Field Programmable Gate Array

# Chapter 1

# Introduction

The following article is a guideline on how to write a project proposal and a feasibility report in The Department of Electronic & Telecommunication Engineering, University of Moratuwa. The report should include the following details:

1. **Abstract:** An informative abstract (length – 1 page) should be included beneath the Undergraduate graduation project report title, authors name, authors department, supervisor name and keywords (max 10 words). The abstract should
2. state the scope and principal objectives of the project
3. describe the current available solutions
4. summarise the novelty
5. state potential benefits
6. **Chapter 1. Introduction:** The main objective of the introduction is to inform the reader why he/she should want to read the body of the report. It should supply sufficient background information to allow the reader to understand and evaluate the problem in hand, objectives of the project, and the scope. The Introduction should
7. present and justify the problem you are going to solve
8. state the main objectives of the project
9. main novelty of the project
10. potential applications
11. navigation to the following chapters
12. **Chapter 2. Literature Survey:** A comprehensive literature survey must be included in your report. You should describe the current state-of-the-art in the relative field. Discuss the limitations of the previous work and the improvements you are planning to make with your project.
13. **Chapter 3. Methodology:** This chapter should include the details on how you are going to approach the project. You must provide an overall view on the proposed solution. This chapter should include
14. Proposed system architecture
15. Possible alternatives
16. Risks associated with the project and a risk management plan
17. A budget
18. Task delegation among the group members
19. A timeline
20. Initial results
21. **Chapter 4. Discussion and Conclusions:** The discussion and conclusion sections should include (a) main findings of your literature survey (b) technical, financial and social feasibility of the project (c) the local and global impact of your project (d) conclusions drawn from initial results (especially regarding significance), with a summary of the evidence for each conclusion.
22. **References:** Your report must contain a list of references
23. These notes have been produced in accordance with the traditions and conform to the layout and appearance of an Undergraduate graduation project report including the style, the font sizes, line spacing, margins, page setup etc.

2. Submission Procedure: A hardcopy must be submitted to the supervisor. A softcopy must be uploaded to Moodle.

Chapter 2

# Layout of the Project proposal and feasibility Report

## 2.1 Margins

When the report is typed, there should be a margin of 1.5 inches on the left-hand side of each page. Candidates are in addition advised to leave a margin of 1 inch on the right-hand side of the page and 1 inch at the top and bottom of each page. The binders may find it necessary to trim the pages of volumes and the latter advice should ensure that the presentation remains acceptable and that none of the text is lost as a result of trimming.

## 2.2 Pagination

Traditional consecutive page numbering is required where the first page of Chapter 1 starts from 1 and the pagination continues until the end of the report. Pages preceding the first chapter must not exceed 40, unless otherwise suggested by the supervisor. These pages are numbered using roman numerals.

## 2.3 Use of Word-Processors in Preparing an Undergraduate graduation project report

When using a word-processor, care should be taken with equations and symbols needing sub-scripts and super-scripts. All reports should be printed using laser printers.

Candidates who have any queries regarding the above notes or who wish to obtain further advice as to the form of presentation of an Undergraduate graduation project should consult the project coordinator. If in doubt it is preferable to check and ensure that the presentation is correct at an early stage rather than face delays and inconvenience at the time of submission.

## 2.4 Fonts

All text throughout the report should be Times New Roman font with a 12 point size except for the following:

1. The title on the cover should be typed using 16 point bold font, with capital letters.
2. The title on the title page should be typed using 14 point bold font, with capital letters.
3. Chapter heading “Heading 1” should be 14 point font, all capital letters. The chapter heading may be preceded by, writing, “Chapter 1” which should be typed using 18 point bold font with small-case letters and first letter capital.
4. Section headings in each chapter “Heading 2” should be 12 point bold font, not capital.
5. Subsections in each section “Heading 3” should be 12 point italic using Times New Roman small case font, not bold.

Further details can be seen from the example pages shown in section 4 of the report.

## 2.5 Paragraphs

All paragraphs should be fully justified (extending from left margin to right margin) with 1.5 line spacing except for the abstract. Single line spacing must be used when typing the abstract.

## 2.6 Figures and Equations and Tables

All figures must be cantered and properly labelled. They must be drawn by using a proper computer software of your own choice and printed on a laser printer. The figure captions should be printed using a 10 point proportional font such as Times New Roman with single line spacing. An example is shown below:

### 2.6.1 An Example of a Figure Layout

An example figure is shown below.

As shown in Fig.1.1, all variables within and outside a figure are in *italic* style but the numbers and parentheses are in normal style.



Fig.1.1. An MCM communications system example.

### 2.6.2 An Example of an Equation Layout

The equations must be right justified and properly numbered using parenthesis. An example of the equation layout and referencing in the text is shown below:

... A double sideband suppressed carrier signal can be represented by:

 (2.1)

The detection of such a signal requires coherent demodulation as is evident from (2.1). Note that all variables used throughout the text must be *italic*, but not the numbers and parentheses.

### 2.6.3 An Example of a Table Layout

An example layout for the tables is given below.

Table.2.1 The table layout style description

|  |  |
| --- | --- |
| Borders | All line styles acceptable |
| Caption | 10-point proportional font with centred alignment |
| Body Text | 12-point proportional font |
| Alignment | Left Justified (Touching the left margin) |

Chapter 3

# Bibliographical References

## 3.1 Introduction

Most of the institutions throughout the world abide by the copyright protection laws and therefore avoid using someone else’s work without clearly explaining that the work is done by someone else. This is done by using reference to the previously published work with a reference number and listing the reference at the end of your work. The following section gives advice and examples on a widely used methods of making references in your text [1,2] and on how to list them at the end of your work [3,4].

## 3.2 Citing References in the Text

Cited publications are numbered in the order in which they are first referred to in the text. They are identified by a number given as follows:

... In a recent study [5] it was shown that...

## 3.3 Listing References at the end of the Text

Bibliographical references sufficient to identify the publications fully must be listed at the end of your text. The listing may be done in any one of the following ways:

3.3.1 *Example of Referencing Styles*

[1] H. A. Amca, "Evaluation of adaptive techniques to improve the performance of indoor millimetrewave wireless communications systems", *ICUPC’95, The IEEE Conference on PCS*, Tokyo, 6-10 Nov.1995, pp.369-372

[2] J. G. Proakis, *Digital Communications, Third Edition,* McGraw Hill, USA 1995.

[3] Brooks, T: *Walls come tumbling down : a history of the Civil Rights Movement 1940-1970*. Englewood Cliffs, Prentice-Hall, 1974.

[4] J. T. Elliff, *Aspects of Federal Civil Rights enforcement: the Justice Department and the F.B.l., 1939-64.* Perspectives, vol. 5, 1971, pp. 621-622.

[5] A. M. Schlesinger, *Robert Kennedy and his times*. Boston, Houghton Mifflin, 1978.

[6] H. Bilgekul and H. Amca, "Multicarrier Transmission Employing Quadrature Frequency/Phase Modulation", *Electronics Letters,* 24th Oct. 1996, Vol.32, No.22, pp.2051-2052.

[7] H. Bilgekul and H. Amca, "Multicarrier, Quadrature-4FSK/BPSK System for multipath channels", *AEÜ Int. Journal of Electronic Communications*, July 1998.

[8] H. Amca, T. Yenal, and K. Hacioglu, Adaptive Equalization of Frequency Selective Multipath Fading Channels Based on Sample Selection, Accepted for publication by *IEE Proceedings on Communications*, 19 Aug. 1998.