

Samrat Ashok Technological Institute, Vidisha (M.P.)

(A Grant-in-Aid Autonomous Engineering College)

GUIDELINES FOR PREPARATION OF REPORT FOR MAJOR/MINOR PROJECT

Introduction:

Project report in this manual refers to a documented report of the process followed and the results of major project conducted by a student in fulfillment of the requirements in bachelor degree. This report will outline the report format for Major/Minor Project. These rules must be adhered strictly.

Group Members:

1-4, maximum of 5 students per group is allowed for taking up Major Project.

No of Copies to be submitted to department:

2 copies have to be submitted to department, 5 copies (as per the group members) are individual reports of each student. A soft copy (pdf format) should be submitted to Department email ID.

The Major Project report will be hard winded having Black as the front cover with text printed in fonts of golden color.

***The Minor Project report will be spiral winded.**

Formatting:

	MAIN HEADING	SUB HEADING	MAIN TEXT
FONT	Times New Roman (Bold),	Times New Roman (Bold),	Times New Roman
SIZE	14	12	12
LINE SPACING	1.5		

Arrangement of Content:

The sequence in which the contents in the report should be arranged is as follows:

1. Cover Page
2. Certificate
3. Declaration
4. Acknowledgment

5. Abstract
6. Table of Contents
7. List of Figures (if any)
8. List of Tables (if any)
9. Chapters
10. References
11. Coding
12. User Manual

Chapters to be included:

The chapters that should be included in the reports are as follows:

- Introduction
- Brief Literature survey
- Present Work (It will be divided into several chapters and each chapter may be further divided into several divisions and sub-divisions depending on type & volume of work. For e.g. Block diagram & its description, circuit designing, PCB layout & development process, description of components etc.)
- Result & Discussion
- Conclusion & future scope

Detail Instructions:

Abstract – It is a heart of the report. Abstract should be one page synopsis of the project report and it must clearly give the overview of the project (Avoid unnecessary things in abstract).

Table of Contents – The table of contents should list all material following it as well as any material which precedes it. The title page and Certificate of approval will not find a place among the items listed in the Table of Contents but the page numbers of which are in lower case Roman letters. One and a half spacing should be adopted for typing the matter under this head. A specimen copy of the Table of Contents of the project report is given.

List of Figures – The list should use exactly the same captions as they appear below the figures in the text. One and a half spacing should be adopted for typing the matter under this head.

List of Tables – The list should use exactly the same captions as they appear above the tables in the text. One and a half spacing should be adopted for typing the matter under this head.

Page numbering - The preliminary parts (Acknowledgement, Abstract, Table of Contents, List of symbols, List of figure, List of Tables) are numbered in roman numerals (i, ii, etc). The first page of the first chapter (Introduction) onwards will be numbered in Arabic numerals 1 2 3 etc.

Numbering sections, subsections, equations, figures etc. - A word on numbering scheme used in the project is in order. It is common practice to use decimal numbering in the project. If the chapter number is 2, the section numbers will be 2.1, 2.2, 2.3 etc. The subsections in section 2.2 will be numbered as 2.2.1, 2.2.2 etc. Unless essential, it is not necessary to use numbers to lower levels than three stages. Similarly, it is useful and convenient to number the figures also chapter-wise. The figures in chapter 4 will be numbered as Figure 4.1: Figure Name, Figure 4.2: Figure Name etc. This helps you in assembling the figures and putting it in proper order. Similarly, the tables are also numbered as Table 4.1: Table Name, Table 4.2: Table Name etc. All figures and tables should have proper captions. Usually the figure captions are written below the figure and table captions on top of the table. All figures should have proper description by legends, title of the axes and any other information to make the figures self explanatory. The same numbering scheme can be used for equations also. Only thing to be remembered is that references to the figures are made like Figure 4.2: Figure Name, and equations as Eq. (5.8).

List of References –The reference material should include the author name, title, year in details as given. Do not mention the references of the websites in the report.

Coding–The complete code of the coding part of your project is to be provided (with comments wherever necessary).

User manual–It must include the complete user handling process of your hardware/software project.

DO NOT WRITE SIR/MADAM ANYWHERE IN THE NAME/DESIGNATION OF THE FACULTY

Project Title

A

Major/Minor Project Report

Submitted in partial fulfilment of the requirement for the award of the degree

Bachelor of Technology

in

Electronics and Communication Engineering

Submitted to



**Samrat Ashok Technological Institute
Vidisha (M.P.)**

(A Grant-in-Aid Autonomous Engineering College)

Submitted by

Name of Student Enrollment Number
Name of Student Enrollment Number
Name of Student Enrollment Number
Name of Student Enrollment Number
Name of Student Enrollment Number

Under the supervision of
Dr./Mr./Mrs/Miss <Name of
Electro and Commnication
of Engineering
Degree>
Designation

Department of Electronics Engineering
Samrat Ashok Technological Institute, Vidisha (MP) – 464001
2023-24

Samrat Ashok Technological Institute, Vidisha (M.P.)
(A Grant-in-Aid Autonomous Engineering College)

CERTIFICATE



SESSION 2023-24

Department of Electronics Engineering

This is to certify that <Name of Student>, <Name of Student>, <Name of Student>, <Name of Student>, <Name of Student>, <Name of Student>, <Name of Student>, students of B.Tech. VIII sem, **Electronics & Communication Engineering** of this institute has successfully submitted a Major Project “<Project Title>”, as a partial fulfilment for the award of Degree of Bachelor of Technology in Electronics and Communication Engineering from **Samrat Ashok Technological Institute, Vidisha (M.P.)**

Their work is found to be satisfactory. We wish them success in all their future endeavors.

Project Supervisor

**Dr./Mr./Mrs/Miss <Name of
Electro and Communication
of Engineering
Degree>
Designation**

Head of Department

Dr. Ashutosh Datar
Professor

Director

Dr. R. K. Pandit

Samrat Ashok Technological Institute, Vidisha (M.P.)

(A Grant-in-Aid Autonomous Engineering College)

Declaration

We <Name of Student>, <Name of Student>, <Name of Student>, <Name of Student>, <Name of Student>, <Name of Student>, students of B.Tech. VIII sem, Electronics & Communication Engineering, Session of Samrat Ashok Technological Institute, Vidisha (M.P.) hereby state that the work presented in this Project entitled “<Project Title>” is the outcome of our own work. It is correct to the best of our knowledge and has been carried out taking care of engineering ethics. The work has not been submitted to any other University or anywhere else for the award of any degree or any professional course/programme.

Signature.....
<Name of the student>
<Enrollment Number>

Signature.....
<Name of the student>
<Enrollment Number>

Signature.....
<Name of the student>
<Enrollment Number>

Signature.....
<Name of the student>
<Enrollment Number>

Signature.....
<Name of the student>
<Enrollment Number>

ACKNOWLEDGEMENT

We the students of Electronics and Communication Engineering, Final Year, hereby take immense pleasure in thanking **Dr. R. K. Pandit, Director, SATI, Vidisha** for providing the best facilities in the college without whom this work would not have been possible at this level.

We are highly thankful to **Dr. Ashutosh Datar, Head of Department, Electronics and Communication Engineering** for his help in completion of this project, without whose valuable advice and proper guidance, it would have been impossible for us to complete the project.

We are highly thankful to **<Name of Guide>, Assistant Professor, Department of Electronics Engineering**, our project guide, for **<his/her>** constant encouragement and valuable advice during the course of development of this project.

We are grateful to Major Project Committee and all our colleagues who gave us invaluable suggestion during the course of work. We would also like to thank the entire staff of Electronics Department for extending their support and co-operation.

<Name of the student>

<Enrollment Number>

ABSTRACT

Over recent years the MIMO (Multiple-Input Multiple-Output) system has become a popular technique in wireless communication. MIMO is a system with multiple transmitting and multiple receiving antennas. With increasing the number of transmitting and receiving antennas significant improvement in the bit error rate (BER) was observed than that with single transmitting and single receiving antenna system. Also with increase in the number of transmitting and receiving antennas the data rate of the system was found increased, hence considerable improvement in an information rate. Performance of the bit error rate probability of the channel with variable signal to noise ratio will change with channel quality in case of the non adaptive modulation scheme. In some application, system will require the minimum BER. Hence fixed modulation scheme will not perform better in such application. With the use of the adaptive modulation scheme, system will automatically cope up with the changing channel condition and accordingly selects the modulation scheme for maintaining minimum required BER. The throughput of the system was found improved with the use of adaptive modulation in MIMO system.

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References

- [1] R. Gowardhan and M. F. Demirkol, "Adaptive M-QAM Modulation for MIMO Systems", IEEE 2005, University of Hawaii at Manoa, Honolulu, USA, 2005
- [2] A. Svensson, "An Introduction to Adaptive QAM Modulation Schemes for Known and Predicted Channels", Proceedings of the IEEE | Vol. 95, No. 12, December 2007