Matoshri Education Society's

Matoshri College of Engineering & Research Centre, Nashik

Department of Electrical Engineering

PROJECT WORKBOOK

Class: B. E. Electrical

Academic Year: 2022-23

Roll No.	Name of Student	Exam Seat No.

Project Guide: _____

Table of Content

PROJECT APPROVAL CERTIFICATE

(STAGE-I)

The project report entitled

“ _____ ”

Submitted by

1. **Name of student**
2. **Name of student**
3. **Name of student**
4. **Name of student**

are approved for the partial fulfillment of the requirements of **Savitribai Phule Pune University, Pune** for the award of degree of Bachelor of Engineering in Electrical Engineering during academic year **2022-23**.

Name of Guide	Mr. Bhise D. R.	Dr. Khule S. S.
Internal Guide	**Project Co-ordinator**	**H.O.D.**

Remark of Project Stage-I by External Examiner:

_____

_____

Name & Sign of External Examiner

PROJECT APPROVAL CERTIFICATE

(STAGE-II)

The project report entitled

“ _____ ”

Submitted by

5. **Name of student**
6. **Name of student**
7. **Name of student**
8. **Name of student**

are approved for the partial fulfillment of the requirements of **Savitribai Phule Pune University, Pune** for the award of degree of Bachelor of Engineering in Electrical Engineering during academic year **2022-23**.

Name of Guide	Mr. Bhise D. R.	Dr. Khule S. S.
Internal Guide	**Project Co-ordinator**	**H.O.D.**

Remark of Project Stage-II by External Examiner:

_____

_____

Name & Sign of External Examiner

Date:

Place: Matoshri College of Engineering & Research Centre, Nashik

DECLARATION

We,

1. **Name of student**
2. **Name of student**
3. **Name of student**
4. **Name of student**

hereby declare that this submission is our own work and that, to the best of our knowledge and belief, it contains no material previously published or written by another person nor material which has been accepted for the award of any other degree or diploma of the university or other institute of higher learning, except where due acknowledgement has been made in the text.

Sr. No.	Name of Student	Exam Seat No.	Signatures
1			
2			
3			
4			

Place:

Date:

Matoshri College of Engineering & Research Centre, Nashik

Department of Electrical Engineering

UNDERTAKING BY STUDENTS

We,

1. **Name of student**
2. **Name of student**
3. **Name of student**
4. **Name of student**

the students of B.E. Electrical Engineering hereby assure that we will follow all the rules and regulations related to project work and activities for our work and Project entitled as "**Title of Project**" We assure that the project work will be fully designed/developed by us and every part of the project will be original work and will not be copied/ purchased from any source.

Sr. No.	Name of Student	Exam Seat No.	Signatures
1			
2			
3			
4			

1. Introduction

The word *project* comes from the Latin word *projectum* from the Latin verb *proicere*, "to throw something forwards" which in turn comes from *pro-*, which denotes something that precedes the action of the next part of the word in time (paralleling the Greek πρό) and *iacere*, "to throw". The word "project" thus actually originally meant "something that comes before anything else happens".

–http://en.wikipedia.org/

The Project is conceiving the idea and implementing it systematically by using the knowledge derived in the course of education mainly to innovate or facilitate.

“Take up one idea. Make that one idea your life-think of it, dream it, live on that idea. Let the brain, muscles, nerves, every part of your body, be full of that idea, and just leave every other idea alone. This is the way to success”

– Great Philosopher Swami Vivekananda

The aim of project work is to allow a student to study the feasibility of the project, planning project, studying existing systems, tools available to implement the project and state of art software testing procedures and technology with use of case tools.

The student will undertake one project over the academic year. The project work may involve the designing a system/subsystem or upgrading an existing system and explore the research component. The design is to be implemented into a working model (software or hardware or both) with necessary software interface as an executable package.

The student shall take up a project in the field closely related to Electrical Engineering. An individual can undertake project. Preferably, a group of 3 students should be formed for project work.

The project work should be based on the knowledge acquired by the student during the graduation and preferably it should meet and contribute towards the needs of the society. The project aims to provide an opportunity of designing and building complete system or subsystems based on area where the student likes to acquire specialized skills.

1.1 Objectives (Stage-I) & (Stage-II)

(STAGE –I) The objectives of the project are,

1. Provide an opportunity to learn new software, interdisciplinary theory, concepts, technology, etc. not covered in earlier subjects.
2. Empower students to use engineering knowledge and skills learned in previous courses to deliver a product that has passed through the design, analysis, testing, and evaluation.
3. Encourage multidisciplinary project work through the integration of knowledge.
4. Allow students to develop problem-solving, analysis, synthesis, and evaluation skills.
5. Encourage teamwork.
6. Improve students' communication skills by asking them to produce both a professional report and to give an oral presentation.

(STAGE –II) The objectives of the project are,

7. Provide an opportunity to learn new software, interdisciplinary theory, concept, technology, etc. not covered in earlier subjects.
8. Empower students to use engineering knowledge and skills learned in previous courses to deliver a product that has passed through the design, analysis, testing, and evaluation.
9. Encourage multidisciplinary project work through the integration of knowledge.
10. Allow students to develop problem-solving, analysis, synthesis, and evaluation skills.
11. Encourage teamwork.

12. Improve students' communication skills by asking them to produce both a professional report and to give an oral presentation.
13. Exposed to the project management skills and ethical practices in project

1.2 Outcomes (Stage-I) & (Stage-II)

(STAGE-I) Course outcomes can be different for the different projects undertaken by the student groups. However, in general, the course outcomes for **Project Stage-I** can be stated as follows.

1. Define the project problem statement and identify the scope of the project.
2. Search the appropriate research papers, standards and e-resources and write a literature survey.
3. Identify tools, techniques, methods, concepts, measuring devices, and instruments required for the project to define the methodology of the project.
4. Justify the selection of electrical, electronic and mechanical components for the project prototyping.
5. Simulate or develop a system for software or hardware verification.
6. Write a project report with proper interpretation of results.

(STAGE-II) Course outcomes can be different for the different projects undertaken by the student groups. However, in general, the course outcomes for **Project Stage-II** can be stated as follows.

7. Identify tools, techniques, methods, concepts, measuring devices, and instruments required for the project to define the methodology of the project.
8. Justify the selection of electrical, electronic and mechanical components for the project prototyping.
9. Select the appropriate testing method for system performance evaluation.
10. Interpret results obtained by simulation, and hardware implementation and decide on further action or write a conclusion.
11. Write a project report and research paper on the project work.

1.3 Guidelines for selection of Project Work

Project is one of the significant contributory works that has to be completed with distinct impression. It is really very difficult to explore the domain of interest/research/society need.

One cannot figuratively define best project but still there are certain parameters on which we can measure the quality of project work done. It will be better suited to go for well–defined and relatively safe projects that provide scope for demonstrating proficiency with a low risk of failure.

VII Semester for Project Work:

The student shall take up a project in the field closely related to Electrical Engineering. An individual can undertake project. Preferably, a group of 3 students should be formed for project work. The project work should be based on the knowledge acquired by the student during the graduation and preferably it should meet and contribute towards the needs of the society.

The project aims to provide an opportunity of designing and building complete system or subsystems based on area where the student likes to acquire specialized skills. Project work in this semester is an integral part of the project work. In this, the student shall complete the partial work of the project which will consists of problem statement, literature review, project overview and scheme of implementation. As a part of the progress report of project work, the candidate shall deliver a presentation on the advancement in Technology pertaining to the selected project topic.

Guidelines to students for Project Stage -I:

1. Form a group of 3-4 students.
2. Select a project problem statement based on an industrial or societal issue and ideate on it.
3. Research on the project topic through existing theories, literature, technology, patents, etc.
4. Define objectives, scope, and outcomes of the project in the 1st presentation.
5. Maintain a notebook to keep records of all the meetings, discussions, notes, etc. This is to be done by the individual student.
6. Some of the parameters mentioned in the above table will be evaluated and assessed at the group level and some at an individual level.

Guidelines to students for Project Stage -II:

1. Continue with the same group and identify opportunities for self-learning and upgrading skills.
2. Actively participate in all the activities related to the project.
3. Document the project in the form of a hard-bound report at the end and submit it to the department.
4. Attempt to make a prototype, working model, and demonstration of the project to display during the final presentation.
5. Participate in project competitions, paper presentations, etc.
6. Maintain an institutional culture of authentic collaboration, self-motivation, peer learning, and personal responsibility.
7. Maintain a notebook to keep records of all the meetings, discussions, notes, etc. This is to be done by the individual student and submitted at the end to the supervisor or guide.
8. Some parameters, mentioned in the above table, will be evaluated and assessed at a group level and some at an individual level.

1.4 Guidelines for Project report Evaluation:

Project report work is to be evaluated by both Internal and External examiners jointly, unanimously agreeing the following points among many others-

- Technical Credibility, Research Component and scope of the project
- Literature Survey done.
- Software Engineering approach followed
- Implementation of work- Design, coding, performance, documentation etc
- Optimization considerations(Memory, time, Resources, Costing)
- Testing of work
- Project Presentation and Demonstration(User Interface, ease of use and usability)
- Presentation of work in the form of project report Report
- Research components involved
- Participation in various Conferences
- Regularity & Interaction
- Publication of the work in various national/international journals
- Providing supporting manuals(quick reference, system manual, Installation guide etc.) for the user
- Demonstration and Presentation of Project

2. University Syllabus

403145: Project I

Teaching Scheme	Credits	Examination Scheme
Tutorial: 04 Hr/Week	02	Oral: 50 Marks
		Term Work; 50 Marks

Project is an important part of the engineering curriculum covered in the final year. It is divided into Project Stage I and Project Stage II at Semesters I and II of the Final Year. This project is a substantial piece of work that will require creative activity and original thinking. The project aims to provide students with a transitional experience from the academic world to the professional world.

Guidelines for VIIth Semester for Project work

1. Form a group of 3-4 students.
2. Select a project problem statement based on an industrial or societal issue and ideate on it.
3. Research on the project topic through existing theories, literature, technology, patents, etc.
4. Define objectives, scope, and outcomes of the project in the 1st presentation.
5. Maintain a notebook to keep records of all the meetings, discussions, notes, etc. This is to be done by the individual student.
6. Some of the parameters mentioned in the above table will be evaluated and assessed at the group level and some at an individual level.

403152: Project II

Teaching Scheme	Credits	Examination Scheme
Tutorial: 12 Hrs./Week	06	Oral: 50 Marks
		Term work: 100 Marks

Project is an important part of the engineering curriculum covered in the final year. It is divided into Project Stage I and Project Stage II in Semesters I and II of the Final Year. This project is a substantial piece of work that will require creative activity and original thinking. The project aims to provide students with a transitional experience from the academic world to the professional world.

Guidelines for VIIth Semester for Project work

Continue with the same group and identify opportunities for self-learning and upgrading skills.

2. Actively participate in all the activities related to the project.

3. Document the project in the form of a hard-bound report at the end and submit it to the department.

4. Attempt to make a prototype, working model, and demonstration of the project to display during the final presentation.

5. Participate in project competitions, paper presentations, etc.

6. Maintain an institutional culture of authentic collaboration, self-motivation, peer learning, and personal responsibility.

7. Maintain a notebook to keep records of all the meetings, discussions, notes, etc. This is to be done by the individual student and submitted at the end to the supervisor or guide.

8. Some parameters, mentioned in the above table, will be evaluated and assessed at a group level and some at an individual level.

Matoshri College of Engineering & Research Centre, Nashik

Department of Electrical Engineering

4. UNDERTAKING BY STUDENTS

We

1. **Name of student**
2. **Name of student**
3. **Name of student**
4. **Name of student**

, the student of B.E. Electrical Engineering hereby assure that we will follow all the rules and regulations related to project work and activities for my work and Project entitled

as_____

_____

we assure that the project work will be fully designed/developed by me and every part of the project will be original work and will not be copied/ purchased from any source.

Sr. No.	Name of Student	Exam Seat No.	Signatures
1			
2			
3			
4			

Place:

Date:

5. Instructions Regarding Project Proposal, Finalization and Submission:

1. The project work may involve the designing a system/subsystem or upgrading an existing system. The design is to be implemented into a working model (software or hardware or both) with necessary software interface as an executable package (installable CD or hardware model) along with
   i. User & system manual and quick reference guide
   ii. Project report
2. The idea for Project work can be a proposal based on an IEEE, Elsevier, Springer or ACM transaction or similar international journal of repute with good impact factor. Sponsored / funded projects by various authorities such as AICTE, DST, and TIFR could be opted as a choice.
3. Students may collect the letter required for the project sponsorship from ME coordinator.
4. Synopsis must include project title, sponsor details (if any), detailed problem definition, statement of Hypothesis, area, abstract, details of existing similar systems if any, scope of the project exploring the research component, reference of the base paper. Sponsorship details include name of sponsoring authority, address, name of guide, sponsorship terms & conditions and respective document certifying the same from authorities.
5. Project monitoring panel will approve the project report work title only after presentation in the first week of August. Presentation will cover details mentioned in the synopsis as above.
6. To include the habit of research publication; the project report must be supported with at least one Journal paper publication either in relevant International Journal having ISSN Number like IEEE Transaction / ACM / IET/ Elsevier/ Springer/ BITS Journal/ IIT Journals. The stage I project report will be accepted after publication of at least one international journal and one conference paper covering project area and work. Complete project report will be accepted after at least two international

journals and one international conference paper. Preferably one paper in journal with impact factor of greater than one.

7. Format for all documents, to be submitted is provided in this booklet.

6. Schedule of Project work:

Semester VII (Project Stage - I)

Sr. No.	Activity Scheduled	Date
1	Registration of Project	First week of August
2	Submission of Project Synopsis	Last Week of August
3	Project Presentations	First week of September
6	First presentation about progress of Project work	Last week of September
7	Second presentation about progress of Project work	Mid of October
8	Third presentation about progress of Project work and draft copy of report submission	First week of November
9	Submission of Project Report (Stage I)	First week of November
10	Project work Examination(Stage I)	As per SPPU Notification

Semester VIII (Project Stage - II)

Sr. No.	Activity Scheduled	Date
1	First Project Presentation	Second week of January
2	Second Project Presentation	Second week of February
3	Third Project presentation	Second week of March
4	Final internal presentation & Demonstration Project report preparation and draft copy of report submission	After satisfactory completion of project
5	Final Submission of Project Report	
6	Examination	As per SPPU Notification

7. Format of Project Proposal/Final Synopsis:

After completing the preliminary acceptance work of the project, the student should submit the final synopsis in the format given below:

7.1 Title Page (Project and Student Details)

- Title of the project
- Category / area such as databases, image processing, network based, web technology based etc.
- Student details (Roll no, name, exam no, mobile, address, email, etc) with Signature
- Sponsorship details if any(with Signature of external guide)
  (Sponsorship details include name of sponsoring authority, address, name of guide, sponsorship terms & conditions and respective document certifying the same from authorities.)
- Internal Guide (Name, designation and email) and signature of approval

7.2 Inner Pages: (Approximate 8-10 pages)

- Problem Statement.
- Abstract.
- Literature survey (Hypothesis & Rationale showing Research Component).
- Objectives & Scope.
- Software, Hardware & Test Data requirements.
- Project Plan (Plan of project report execution, Strategy planned associated with the Project report, solving approach and Efficiency issues, Outcomes, Probable date of completion).
- Plan for paper publication (Names of at least 3 Journals where paper are to be presented/ published).

8. Format of Project Report

A report is to be submitted for the Project work done by student in year in following format:

- **Cover Page** (As per format in annexure A)
- **Table of Content** (As per format in annexure B)
- **Project Approval Certificate** (As per format in annexure C)
- **Declaration** (As per format in annexure E)
- **Acknowledgements**
  Thanking any person / staff member / friend if to be done so.
- **Abstract**
  A minimum of 100 words briefing the topic in consideration.
- **Nomenclature**
  Acronyms, Symbols and notations, if any should be included in nomenclature
- **Table of Contents, List of Figures, List of Tables**
- **Chapters ...**
  1. **Introduction**
  2. **Literature Survey**
  3. **Hardware / Software Requirement with Specifications**
  4. **Design and Modeling**

5. **Implementation and Testing**
6. **Result and Analysis**
7. **Conclusion and Future Scope**

- **References**
- **List of Publications**
- **Appendix I:** Copy of Synopsis
- **Appendix II:** Relevant mathematics associated with the Project report: (Modern Algebra)
- **Appendix III:** Publication details.

Description

Following sections is details of all terms and chapters.

Each chapter, topic and subtopic must have at least 3 -4 lines of preamble describing the chapter/topic/subtopic objectives and briefs. Similarly chapter summary in brief is appreciated.

8.1 Categories and Subject Descriptor

- Include the category and subject descriptors for your project report

General Terms

Your general terms must be any of the following 16 designated terms:
Algorithms, Management, Measurement, Documentation, Performance, Design, Economics, Reliability, Experimentation, Security, Human Factors, Standardization, Languages, Theory, Legal Aspects, Verification.

8.2 Acknowledgement

The author of the project report can acknowledge the help and guidance received from different persons in this section. The wording should be formal rather than flowery or exaggerative as it is to be considered only as a method of recording the help received rather than a way of pleasing someone who has helped. Any financial support received

from funding agencies in the preparation of the project report should be definitely stated here.

8.3 Abstract

A minimum of 100 words briefing the topic in consideration. This part of the project report will be the most widely referred and read. It is best written towards the end, but not at the very last minute because you will probably need several drafts. It should be a gist of the project report: a concise description of the problem(s) addressed and your method of solving it/them, your results and conclusions. An abstract must be self-contained. Usually they do not contain references. When a reference is necessary, its details should be included in the text of the abstract. The number of words may be limited to one or two pages. Use of images, screen snap-shots and data tables should be avoided in abstract.

8.4 Table of Contents, Figures, Tables

Details of various Topics, Sub-Topics, with Page No. Figure Index, giving details of page number, figure number and figure caption, Table Index, giving details of page number, table number and table caption (If any) Index of Pseudo-code / Sample code (If any).

TABLE OF CONTENTS

8.4.1 Introduction

Introduction should be minimum of 200 words, briefing of the details to follow. It should include project topic rationale (Why did you choose this topic? How important is it from the basic perspective of your course? Are you contributing something new? If so, what is your contribution?)

- Introduction
- Motivation & hypothesis
- Presently available systems for the same, Advances/additions/updating the existing system
- Detailed problem definition
- Scope and Objectives
- Outcomes
- Project Plan, Project report Plan and Paper Publication Plan **(for Stage I report only)**
- Organization of the Project report

8.4.2 Literature Survey (Historical perspective)

The purpose of the literature survey is to identify information relevant to project work and the potential and known impacts of it within the project area. This section should include a comprehensive report of current market survey done with respect to problem. Include study of similar systems available, if any along with their pros and cons. identify those areas where there is an absence or scarcity and scope for innovation.

8.4.3 Hardware / Software Requirement Specification

- **Requirement analysis**

Actual detailed problem definition. The definition is to include all that is to be done and is to be put up in the final software and / or Hardware (product) that is to be generated from the years work (User's point of view).

The entries under this section are to be categorized under the categories,

1. Necessary functions,
2. Desirable functions, and others

Requirement may not be final and provision should be available to add features dynamically without affecting the actual flow and design of the document. Modified Requirements (after doing feasibility study) are to be prepared under all the 3 categories listed above from the developer's point of view.

The requirements listed herein should be feasible technically from the Software / Hardware point of view.

8.4.4 Implementation and Testing

- This is key chapter that provides details of implementation and supporting theory
- Algorithms
- Software & Hardware specification (Programming language, Platform, Components, Tools,etc)
- Sample codes of important modules

8.4.5 Test Specification

A description of the test environment, including tools, simulators, specialized hardware, test files, and other resources for Unit, integration, regression, system, and validation tests.

- Format technical reviews
- Test plan & Schedule
- Testing tools and environment
- Test cases
- Test results

8.4.6 Results and Analysis

One of the most important parts of the report is the presentation of results. However, do not simply include massive printouts of raw data. That will be virtually unintelligible to a reader. Instead, organize and present your data in a way that focuses on and highlights the important ideas. It may be a table, chart, or graph, but be sure to spend adequate time preparing high-quality visualization aids that enhance your final report.

All of your tables, charts, figures, and graphs should be numbered and have titles. Both the number and the title should be centered either directly above or directly below the table. Tips while presenting your results:

- All rows and columns of table should have an appropriate titles
- All units should be clearly indicated on graphs
- Tables and graphs should be referred to in the text by their figure number
- The analysis and meaning of the values contained in the table should be fully elaborated in the body of the text.
- Make the visual large enough that all the text and data values can be easily read.

8.4.7 Conclusion and Future Scope

Your conclusions from results and analysis and provide future scope

8.4.8 Bibliography

This section includes material, which was useful for the preparation of the project report in a general way and is not directly referred to in the project report. It is not essential, but will be of immense help for a student who tries to read and understand the contents of the project report.

8.4.9 References

List out Books, Magazines, Thesis, Journals, Web links etc referred in IEEE format.

References to journal papers should contain the name of the author(s), title of the paper, name of the journal, volume number, issue number, particular pages (pp) and year of publication. If there are more than three authors, it is enough to mention the

name of the first author followed by .et.al (meaning and others). References can be numbered as 1, 2, 3 etc in the order in which they are referred to in the body of the project report as [3] or [3] – [5]. An alternate way as mentioned in some journals is to arrange the references in the alphabetical order of the names of authors in which case the reference in the body of the project report looks like "as mentioned in (AAA and BBB 1990) …". However, for uniformity and brevity, the first method (like the one followed in IEEE journals) is to be used.

8.4.10 Appendices

If there is material that if included in the body of the project report would break up the flow of reading or bore the reader unbearably, it is better to include it as an appendix. Some items which are typically included in appendices are: major derivations or theoretical developments, important and original computer programs, data files that are too large to be represented simply in the results chapters, pictures or diagrams of results which are not important enough to keep in the main text etc.

Annexure I: Synopsis

Annexure II: Relevant mathematics associated with the Project report

Annexure III : Authors Publications

To inculcate the habit of research publication; the project report must be supported with Journal paper publications either in relevant International Journal of repute and good impact factor. Add project report guide as co-author of the paper. (List of publications indicating Title, author, publisher, issue, volume, page No., ISSN, Year)

9. For Stage - I Partial Work Report (Semester VII)

A preliminary report of project work (Partial Project work report) is to be prepared as per the guideline given below and is to be submitted at the end of semester I. It should include following-

- **Cover Page** (As per format in annexure A)
- **Table of Content** (As per format annexure B)
- **Project Approval Certificate Sheet** (As per format in annexure C)
- **Declaration** (As per format in annexure D)
- **Acknowledgements**

  Thanking any person / staff member / friend if to be done so.
- **Abstract**

  A minimum of 100 words briefing the topic in consideration.
- **Keywords**

  A minimum of 4 and maximum of 6
- **Table of Contents, Figures, Tables**
- **Chapters ...**
  1. **Introduction**
  2. **Literature Survey**
  3. **Software Requirement Specification**
  4. **Design and Modeling**
  5. **Conclusion stating status of progress of project and future plan in brief**
- **References**
- **Bibliography**
- **Appendices (synopsis, mathematical analysis, supporting paper and publications)**

Note: For Chapter content guidelines refer page no. (9-12).

- **Formatting Guidelines:**

9.1 Number of Copies:

9.1.1 Project stage-I report – 2(1 for college + 1 for guide + 1 for student)

9.1.2 Project stage-II report– 4 (2 for college + 1 for guide + 1 for student)

9.2 Report Size:

9.2.1 Project stage-I report – preferably 30-40 pages

9.2.2 Project stage-II report– preferably 60-80 pages

9.3 Paper Size: A4 (Executive bond paper)

9.4 Header & Footer:

9.4.1 The header should be 'Project Title centered'

9.4.2 The footer should be 'Department of Electrical Engineering, MCERC, Nashik, Year 2018" and page number

9.5 Page Numbering: The preliminary parts are numbered in *roman numerals* to all till Introduction (i, ii, etc). Introduction onwards will be numbered 1 onwards

9.6 Margins (Mirrored, only for both sided prints)

Top: **1"** **2.** Bottom: **1"** Left: **1.25"** Right:**1"**

9.7 Line Spacing: Main Text of manuscripts should be **Times Roman, 12 pts, justified** and **1.5** line spacing for text and double lines spacing for equations. Leave **two** spaces between section heading and **one** space between two section subheadings

9.8 Numbering sections, subsections, equations, figures etc

Section & Subsection: It is common practice to use decimal numbering in the project report. 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. Headings of paragraphs below the subsections may be bold faced and in sentence case.

Figures & Tables: Similarly, it is useful and convenient to number the figures also chapter-wise. The figures in chapter 4 will be numbered Fig.4.1, Fig 4.2 etc. This helps you in assembling the figuresand putting it in proper order. Similarly, the tables are also numbered as Table 4.1 Table 4.2 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, titleof the axes and any other information to make the figures self-explanatory. Figures in color are not essential, but if it is essential, can be given. If used, all copies submitted should have figures in color.

Equations: The same numbering scheme can be used for equations also. Only thing to be remembered is that references to the figures are made like Fig 4.2 and equations as …….(5.8) and tables as Table 3.8. If there are some appendices, these can be numbered as A1, A2, A3 etc. The equations in these appendices can be numbered as (A1.1), (A2.3) etc.

9.9 Fonts

9.9.1 Chapter titles along with chapter number should be **bold** with **14 PT** typed in all **Capitalize Each Word** aligning atthe **left** of the page with font **Arial**.

9.9.2 **Section headings** should be with **12 pt** and **bold** and **Title case, Left Justified, Times New Roman**

9.9.3 **Subsection headings** should be with **12 pt** and **bold** and **Sentence case, Left Justified, Times New Roman**

9.10 **Images, diagrams, tables** should be placed at the beginning or end to page. Image caption should be below the figure and for tables above the table with Font **Garamond (Bold)**, font size **11 PT** and alignment at **Center**.

9.11 **References:** References to journal papers should contain the name of the author(s), title of the paper, name of the journal, volume number, issue number, particular pages (pp) and year of publication.

Example:

[1] Benjamin Kuo and Martin Luther: An overview of chaotic systems, International Journal of Control, Vol. 21, No 3, March 2004, pp 341-349.

Or

[1] Rober Franklin *et. al.* : An overview of chaotic systems, International Journal of Control, Vol. 21, No 3, March 2004, pp 341-349.

Conferences

Similarly conference papers should mention the name of author(s), title of the paper, name of the conference, place in which the conference was held and date, month and year of the conference along with the page numbers of the paper in the proceedings of the conference.

[1] Mahalanabis A K, Prasad S, Mohandas K P : Adaptive Deconvolution of Seismic Data, IEEE International Conference on Computers Circuits and Signal Processing, Indian Institute of Science, Bangalore, Dec 1998, pp 1025-1029

Books

References to books should contain name of the author, title of the book, name of the publisher, edition number, and year of publication. If possible ISBN Number also can be quoted.

[1] Griffths and Manuel: Introduction to Neuro-fuzzy Systems, Prentice Hall Inc, Edition 2, 1998.

Web Resources

Complete URL including File name.

10. Visit Record (Semester VII& VIII):

Weekly Visit Report

Visit No.	Date	Phase Number	Progress (To be filled in by student)	Comments (To Be Filled by Guide)
1				
2				
3				
4				
5				
6				
7				
8				
9				
10				
11				
12				
13				
14				
15				

11. Tips for Good Presentations

1. **10-20-30 Rule** –This rule states that a power point slide should have no more than 10 slides, last no longer than 20 minutes and have no text less than 30 point font. He says it doesn't matter whether your idea will revolutionize the world, you need to spell out the important nuggets in a few minutes, a couple slides and a several words a slide.
2. **Be Enthusiastic** –Simply reciting dry facts without any passion or humor will make people less likely to pay attention.
3. **Slow Down** – Nervous and inexperienced speakers tend to talk way to fast. Consciously slow your speech down and add pauses for emphasis.
4. **Eye Contact** – Match eye contact with everyone in the room. I've also heard from salespeople that you shouldn't focus all your attention on the decision maker since secretaries and assistants in the room may hold persuasive sway over their boss.
5. **15 Word Summary** – Can you summarize your idea in fifteen words? If not, rewrite it and try again. Speaking is an inefficient medium for communicating information, so know what the important fifteen words are so they can be repeated.

6. **20-20 Rule** –This one says that you should have twenty slides each lasting exactly twenty seconds. The 20-20 Rule forces you to be concise and to keep from boring people.
7. **Don't Read** – This one is a no brainer, but somehow Power point makes people think they can get away with it. If you don't know your speech without cues, that doesn't just make you more distracting. It shows you don't really understand your message, a huge blow to any confidence the audience has in you.
8. **Project Your Voice** - Nothing is worse than a speaker you can't hear. Even in the high-tech world of microphones and amplifiers, you need to be heard. Projecting your voice doesn't mean yelling, rather standing up straight and letting your voice resonate on the air in your lungs rather than in the throat to produce a clearer sound.
9. **Don't Plan Gestures** - Any gestures you use need to be an extension of your message and any emotions that message conveys. Planned gestures look false because they don't match your other involuntary body cues. You are better off keeping your hands to your side.
10. **"That's a Good Question"** – You can use statements like, "that's a really good question," or "I'm glad you asked me that," to buy yourself a few moments to organize your response. Will the other people in the audience know you are using these filler sentences to reorder your thoughts? Probably not. And even if they do, it still makes the presentation moresmooth than um's and ah's littering your answer.
11. **Breathe In Not Out** – Feeling the urge to use presentation killers like 'um,' 'ah,' or 'you know'? Replace those with a pause taking a short breath in. The pause may seem a bit awkward, but the audience will barely notice it.
12. **Come Early, *Really* early** – Don't fumble with power point or hooking up a projector when people are waiting for you to speak. Come early, scope out the room, run through your slideshow and make sure there won't be any glitches. Preparation can do a lot to remove your speaking anxiety.
13. **Get Practice** – Join Toastmasters and practice your speaking skills regularly in front of an audience. Not only is it a fun time, but it will make you more competent and confident when you need to approach the podium.

14. ***Do* Apologize if You're Wrong** – One caveat to the above rule is that you should apologize if you are late or shown to be incorrect. You want to seem confident, but don't be a jerk about it.
15. **Put Yourself in the Audience** - When writing a speech, see it from the audiences perspective. What might they not understand? What might seem boring? Use WIIFM (What's In It For Me) to guide you.
16. **Have Fun** - Sounds impossible? With a little practice you can inject your passion for a subject into your presentations. Enthusiasm is contagious.

13. Internal Project Evaluation Sheet

13.1. Semester VII

Sr. No.	Activity	Deadline (Semester I)	Parameters for Evaluation
1.	Topic Approval Presentations	Up to 3rd Week	• Problem definition clearly stated (YES/NO) • Objectives clearly defined (YES/NO) • The overall project idea is feasible (YES/NO)
2.	Progress Review-1 Presentation	Up to 8th Week	• Problem Definition (5) • Scope & Objectives (10) • Literature Review (10) • Methodology (10) • Block Diagram / Architecture (10) • Project Planning (5) • **Total Marks (50)**
3.	Progress Review-2 Presentation	Up to 12th Week	• Requirement Specification (10) • Literature Review (revised) (5) • Detailed Design (10) • Experimental Setup/Simulation (10) • Performance Parameters (10) • Partial Conclusion (5) • **Total Marks (50)**
4.	Submission of Project Stage –I Report	Up to 14th Week	• Timely submission (5) • Formatting and Report Writing Style (5) • Abstract, Literature Survey, Conclusion (5) • Refereed References (5) • Grammatical correctness in the report (5) • **Total Marks (25)** **(Review 1+ Review 2) conversion to 25 marks +Report (25 marks) = 50 Marks**

13.2. Semester VIII

Sr. No	Activity	Deadline (Semester II)	Parameters for Evaluation
1	Progress Review 3 Presentation	Up to 6th Week	➢ Revised Final Design (10) ➢ Tools and Techniques Used with justification (10) ➢ Partial Implementation/ development (15) ➢ Partial Results (15) ➢ **Total Marks: 50**
2	Progress Review 4 Presentation	Up to 12th Week	➢ Implementation Status of project (10) ➢ Testing and Evaluation (10) ➢ Intermediate Results (15) ➢ Conclusion (10) ➢ Future Scope (5) ➢ **Total Marks (50)**
3	Submission of Project Stage –II Report	Up to 14th Week	➢ Timely submission (5) ➢ Formatting and Report Writing Style ➢ (5) Abstract, Literature Survey, Conclusion (10) ➢ Grammatical correctness in the report (5) ➢ Publication/participation in project exhibition (20) Total Marks (50) ➢ **Review 3+ Review 4+ Final Project Report = 150 (Rounded to 100 Mark)**

Matoshri College of Engineering & Research Centre, Nashik
Electrical Engineering Department
B.E Project Evaluation A.Y. 2022-23 (Sem-I)

Progress Review-I Presentation

Sr. No.	Group No.	Name of Group Members	Project Guide	Problem Definition (5)	Scope & Objectives (10)	Literature Review (10)	Methodology (10)	Block Diagram / Architecture (10)	Project Planning (5)	Total Marks (50)
1	1									
2										
3										

Progress Review-II Presentation

Sr. No.	Group No.	Name of Group Members	Project Guide	Requirement Specification (10)	Literature Review (revised) (5)	Detailed Design (10)	Experimental Setup/Simulation (10)	Performance Parameters (10)	Partial Conclusion (5)	Total Marks (50)
1	1									
2										
3										

Submission of Project Stage –I Report

Sr. No.	Group No.	Name of Group Members	Project Guide	Timely submission (5)	Formatting and Report Writing Style (5)	Abstract, Literature Survey, Conclusion (5)	Refereed References (5)	Grammatical correctness in the report (5)	Total Marks (25)
1	1								
2									

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Electrical Engineering Department

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Progress Review-III Presentation

Sr. No.	Group No.	Name of Group Members	Project Guide	Revised Final Design (10)	Tools and Techniques Used with justification (10)	Partial Implementation/ development (15)	Partial Results (15)	Total Marks (50)
1	1							
2								
3								

Progress Review-IV Presentation

Sr. No.	Group No.	Name of Group Members	Project Guide	Implementation Status of project (10)	Testing and Evaluation (10)	Intermediate Results (15)	Conclusion (10)	Future Scope (5)	Total Marks (50)
1	1								
2									
3									

Submission of Project Stage –II Report

Sr. No.	Group No.	Name of Group Members	Project Guide	Timely submission (5)	Formatting and Report Writing Style (10)	Abstract, Literature Survey, Conclusion (10)	Grammatical correctness in the report (5)	Publication/participation in project exhibition (20)	Total Marks (50)
1	1								
2									
3									

Sr. No.	Group No.	Name of Group Members	Project Guide	Review 3 (50)	Review 4 (50)	Final Project Report (50)	Review 3 + Review 4 + Final project report (Total 150)	Converted total (100)
1	1							
2								
3								