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*Renewable Energy
&
Sustainability Engineering*

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PALESTINE

Writing The Project Documentation

**Graduation
Projects
Format**

Topics That Will Be Covered

Structure:

- Title Page or Cover Sheet
- Abstract
- Acknowledgements (Optional)
- Content Listing
- List of Figures and Tables
- Abbreviations : all symbols used in the text have to be properly defined including the units.
- Introduction
- Literature Review
- Theory
- Presenting Data : Experimental & Calculations
- Results
- Discussion of Results
- Conclusions
- Appendices
- References

Writing And Structuring Reports

Notes:

- ✓ You should know exactly the type of information you will include in your report.
- ✓ Try not to miss any important information that should support your project.
- ✓ Use Chapter Breakdown Structure to identify the structure of the report
- ✓ Identify all chapter names, sections and sub-sections
- ✓ Identifying the contents of each chapter, makes writing much easier
- ✓ Good work (software for example) could be ruined by a poor report, that doesn't justify your practical work right.

Writing Style

- Use the layout, font style, ..etc. as described in the Project guide
- **Grammar Style: Good reports can be ruined by poor grammar!!**
So pay attention to the grammar you use.
- A good writing style comes with practice, the more you write the easier it becomes
- Reading also helps you to improve your own writing skills.
- Text font size: 12 Times New Roman

Writing Style

Tips for a professional writing style:

Try to write in the third person. Avoid using pronouns like, I, you, we, my and so on. Example:

Don't write: I interviewed seven people to see what they thought of the system

and write: Seven people were interviewed to determine their thoughts on the system

or write: The author interviewed seven people to see what they thought of the system

- Avoid complex and long sentences

Formal Report

The report should be type written including graphs and figures by a computer.

- Use double spacing with 12 font (Times New Roman) . Spell check your report.
- Title Page / Cover Page
- Course and section Number
- Number and title of the Project
- Student's name
- Names of group members
- Date the report is submitted.

Abstract

- ✓ **ALWAYS**, write your abstract after the document is almost finished
- ✓ This is a stand-alone summary of the report.
- ✓ It should include objective, what was done, results and conclusions.
- ✓ It should be clear, informative, concise and short.
- ✓ It should not make any references to the body of the report or to the appendices.
- ✓ An abstract should not exceed one page.

Introduction

This chapter should contain the following

- ✓ Overview**
- ✓ Background**
- ✓ Statement of the problem**
- ✓ Scope of investigation and method of approach**
- ✓ Report overview.**

Literature Review

- ✓ In a literature review, you're aiming to summarize and provide a critical analysis of the research arguments you have found in your readings, without making new contributions to the literature.
- ✓ You start by identifying your sources, then you read and re-read them.
- ✓ Next, you think about any gaps in the research or literature you have used, and finally, you write your review using all the preparation and information gathered in the steps prior.

Theory

- ✓ In this section state and explain any equations or theoretical principles and assumptions that were used in the experiment/ project and the analysis.
- ✓ Define all parameters used.
- ✓ To find this information refer to textbooks, notes etc.
- ✓ Write equations using equation writer in the word processor.

Experimental Part

- Give a detailed description of how you accomplished the experiments. This should include equipment used in the experiment as well as how it was used.
- The description should have sufficient detail so that another experimenter could duplicate your efforts.
- Name all measured quantities and how they are measured.
- Use sketches, diagrams, or photos to describe the experimental set-up.
- Label the main components.

Calculations

- Demonstrate how you performed the calculation made in the experiments
- Include a detailed sample calculation including used formulas and constants.
- Show the generic calculations to support all your work.
- Provide any computer or calculator program listings, along with sample input and output.

Results

- Summarize your results in an introductory sentence.
- Relate your results to your objective.
- Present the results in the easiest way for your reader to understand and how the experiment's hand out requires:
- Graphs, tables, figures, etc. Spreadsheets are often a good approach. See section on preparation of graphs.
- **All tables and figures must be referenced in the text;** use a numbering system for identification of each one and each should have a distinguishable title.

Discussion of Results

- Explain the results of the experiment; comment on the shapes of the curves; compare results with expected results; give probable reasons for discrepancies from the theory; answer any questions outlined in the instructions and solve any problems that may have been presented.
- Tell why things happened, not only that they did happen.
- Comparisons should include numerical values and corresponding error percentages where relevant.
- *Do not present calculations and formulas in this section.*
- *Your calculations should be detailed in the Appendices under Sample Calculations.*
- *Formulas should be discussed in the Theory section.*

Conclusions

This chapter should contain the following:

- ✓ State your discoveries, judgments and opinions from the results of this experiments in your project.
- ✓ Project Achievement
- ✓ To how extent has the project met its objectives
- ✓ The contribution
- ✓ and Future Work
- ✓ Includes the summing of the work done, problems faced, lessons learned, and **Recommendations for future work.**

Appendices

Supplied, if required, for data sheets, program listing, Mathematical derivation... etc.

Data Tables

- Data tables are for the convenience of the extremely interested reader.
- These tables may contain any additional comparisons or calculations that you have prepared and were not included in the Results section which may contain only summaries of your work.
- Data Tables are the place to show everything that you did.

Raw Data Sheets

- Data sheets must be completed in ink and signed by the instructor at the completion of the laboratory period.
- In the case of an error, line through the mistake, initial the mistake, and continue. Record the name of the recorder and the group members on the raw data sheets.

References

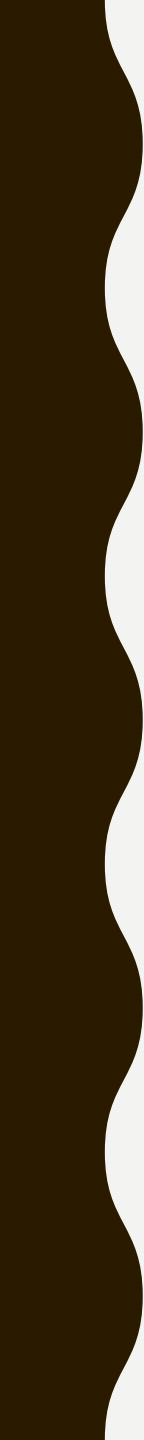
1. List any book or publication that you have referenced in your report. Provide titles, authors, publisher, date of publication, page number, Website addresses etc.
2. **Book reference:** Author last name, Author first name. Book's title. Publisher and city of publication, year of publication.
3. **Journal reference:** Author last name, Author first name. Paper title, Name of journal, volume, pages, year.
4. **Internet reference:** Site location Available :(<http://www.>) and retrieved date.

Note : The references should be cited in the text .

Writing And Structuring Reports

Proof-reading, check and correct:

- ✓ All group members should re-read the written documents as a whole, and suggest any corrections or modifications.
- ✓ It is ok to get someone else to read it for you, as an additional proof reading.



Thanks a lot for your attention