

AYDIN ADNAN MENDERES UNIVERSITY

Department of Electrical and Electronics Engineering

EE200 - Circuit Laboratory

HOW TO PREPARE A LABORATORY REPORT

Spring 2020

Introduction

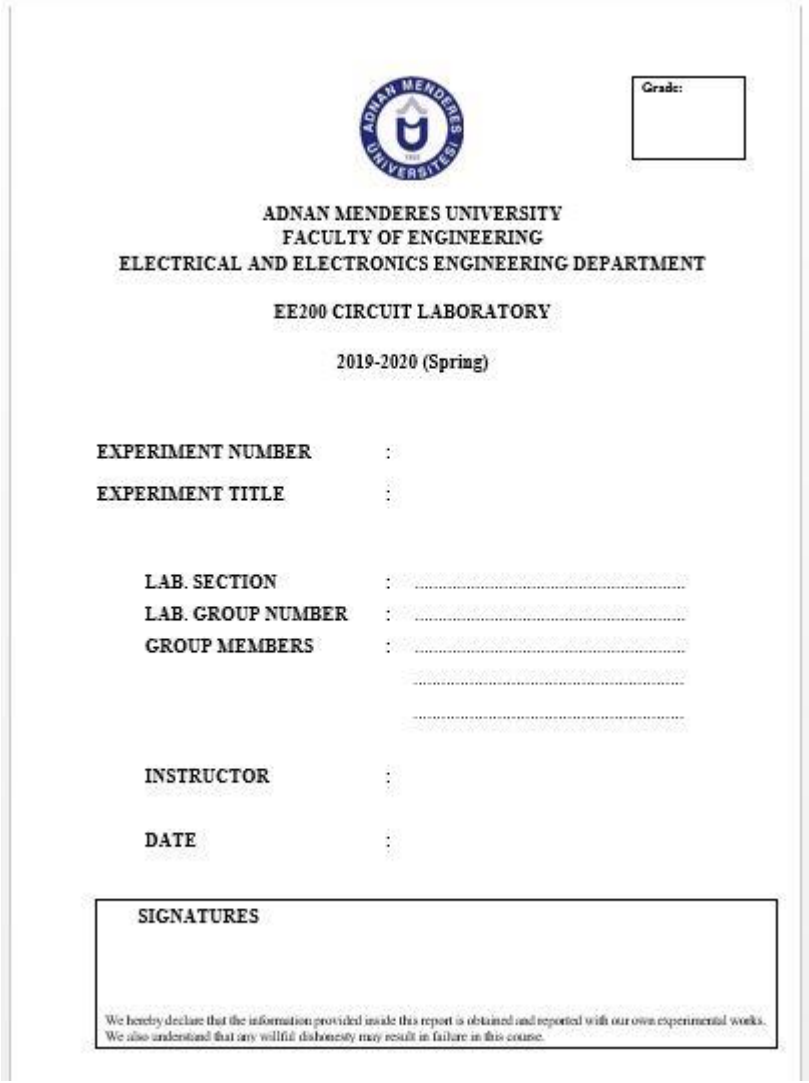
Engineers, scientists, and managers write reports to communicate the results of research, field work, and other activities. Often, a report is the only concrete evidence of your research, and the quality of the research may be judged directly by the quality of the writing and how well you convey the importance of your findings. Content, organization and clarity are the keywords to remember when preparing a report.

Reporting the results obtained from an experiment is as important as conducting the experiment. A sloppy report significantly deducts from the value of the results. Therefore, a properly prepared report is very important.

Fortunately, a lab report has a fairly consistent format that will help you to organize your information clearly. This document covers some important points on how to prepare a proper report for an EE209 experiments.

Format

The cover format of lab report must be in this format given in below:



Grade:

ADNAN MENDERES UNIVERSITY
FACULTY OF ENGINEERING
ELECTRICAL AND ELECTRONICS ENGINEERING DEPARTMENT

EE200 CIRCUIT LABORATORY

2019-2020 (Spring)

EXPERIMENT NUMBER :
EXPERIMENT TITLE :

LAB. SECTION : .....
LAB. GROUP NUMBER : .....
GROUP MEMBERS : .....
.....
.....

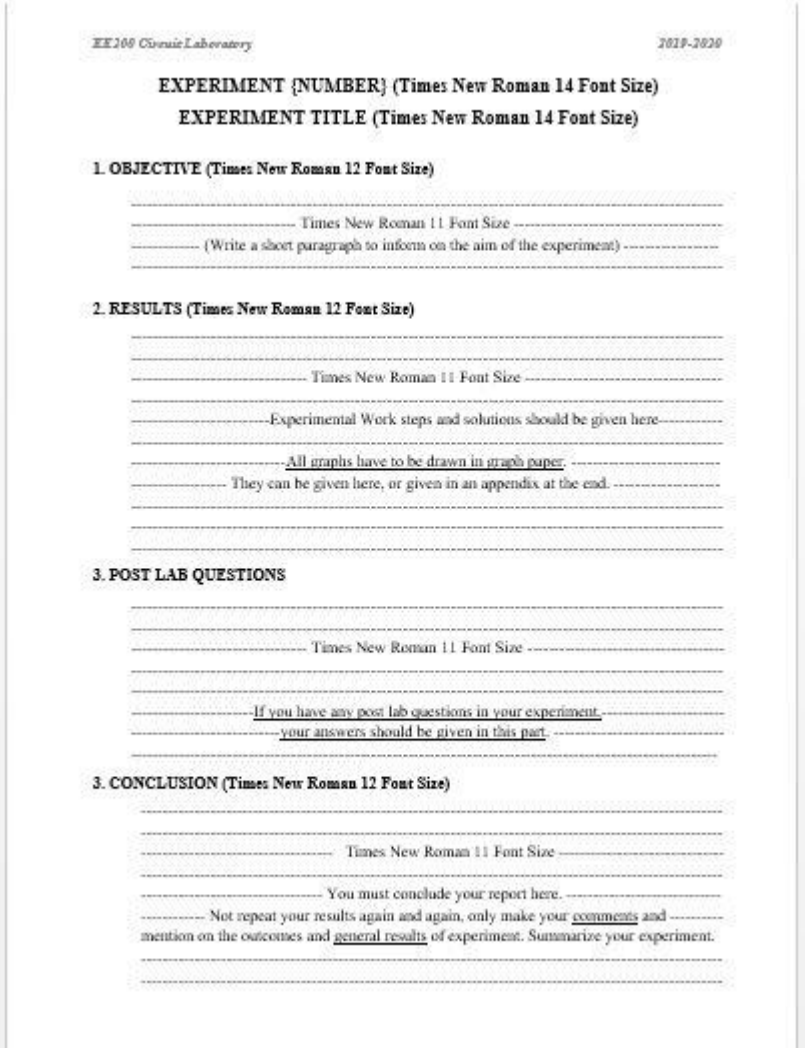
INSTRUCTOR :

DATE :

SIGNATURES

We hereby declare that the information provided inside this report is obtained and reported with our own experimental works. We also understand that any willful dishonesty may result in failure in this course.

Figure 1: Cover format of the laboratory report.



EE200 Circuit Laboratory 2019-2020

EXPERIMENT {NUMBER} (Times New Roman 14 Font Size)

EXPERIMENT TITLE (Times New Roman 14 Font Size)

1. OBJECTIVE (Times New Roman 12 Font Size)

---------- Times New Roman 11 Font Size ----------
---------- (Write a short paragraph to inform on the aim of the experiment) ----------

2. RESULTS (Times New Roman 12 Font Size)

---------- Times New Roman 11 Font Size ----------
----------Experimental Work steps and solutions should be given here----------
----------All graphs have to be drawn in graph paper. ----------
---------- They can be given here, or given in an appendix at the end. ----------

3. POST LAB QUESTIONS

---------- Times New Roman 11 Font Size ----------
----------If you have any post lab questions in your experiment,----------
----------your answers should be given in this part. ----------

3. CONCLUSION (Times New Roman 12 Font Size)

---------- Times New Roman 11 Font Size ----------
---------- You must conclude your report here. ----------
---------- Not repeat your results again and again, only make your comments and ----------
mention on the outcomes and general results of experiment. Summarize your experiment.

Figure 2: Lab report format

The cover format and lab report format will be given and will be filled properly on the computer by the students.

Sections of the Report

There are three main sections of the laboratory report.

- Object
- Results
- Post Lab Questions (If you have any)
- Conclusion

Object:

In this section objectives of the report should be summarized. Laboratory manual also contains a section which explains the objectives of the experiment. The object section in the report should not be copied directly from this section. It should represent your understanding of the experiment with your own words.

Results:

This section contains the results obtained in the experiment. The graphical results should be drawn on graphical papers and should be included in the results. You should compare your results with the expected results; in case they are different then you should state the possible reasons. It is strongly recommended that you enrich your results with your comments.

Post Lab Questions:

This section contains the answers of the post lab. questions. Some experiments do not have ant Post Lab Questions, in this case, you can skip this part in your report.

Conclusion:

The conclusion section is a verbal summary of the experiment. It is important that you do not repeat the results section here; this should be a simple summary of what was done, observed and learned in the experiment.

Plotting the Graphs

Some of the results are presented by graphs more efficiently. Therefore, graphs are frequently used in reports. A proper plot should obey the following rules:

- All of the graphs should be plotted on a graphical paper.
- Title of the plot should be written.
- The vertical and horizontal axes should be drawn and clearly named.
- The units of the axis should be written.
- Origin of the plot should be clearly indicated.
- The indicators corresponding to each unit on the axes should be depicted clearly.
- Units of the values should always be mentioned.
- Critical or important values should always be mentioned.

Example: A proper graph:

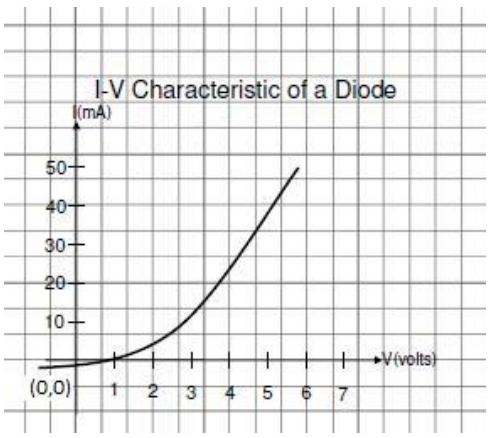


Figure 3: A proper graph example.

An unacceptable graph

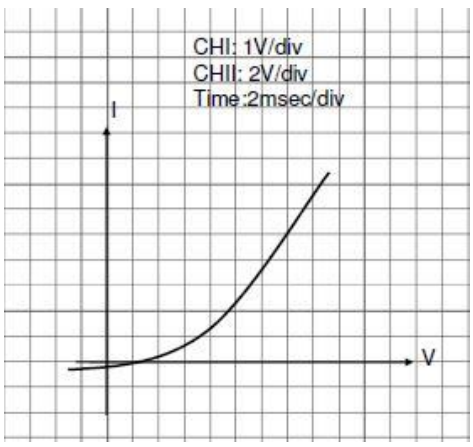


Figure 4: An unacceptable graph example.

The graph shown in figure 4 is completely unacceptable because,

- The title of the graph is not written
- Units of the axes are not given
- Axes are not ‘ticked’. Corresponding values are not shown.

A few important points about the reports

- You should write this report on computer as word document and should follow the report rules in the lab report format given by the instructor.
- You should write in complete, grammatically correct sentences.
- If most of your sentences are long (4 or more 'clauses' or parts) you will confuse the reader. Consider making two sentences (with 3 or less parts in each).
- Be concise. If you can use one word instead of a phrase with two or more words, then choose the one word alternative.
- Be objective. Limit your use of personal pronouns (I, you, we), emotionally loaded words (wonderful, useless, lovely), and casual or ambiguous expressions.
- Use technical terms correctly. Learn what they mean, how to use them, and how to spell them.
- Do not use “will” in the “objective" part, because you performed the experiment.
- Do not use contractions (isn't, doesn't, it's), While these are common in speech, in formal writing the full form (is not, does not, it is) is expected.
- Do not forget to indicate units of the values.

A good lab report does more than presenting the data; it demonstrates the writer's comprehension of the concepts behind the data. Merely recording the expected and observed results is not sufficient; you should also identify how and why differences occurred, explain how they affected your experiment, and show your understanding of the principles the experiment was designed to examine. Bear in mind that a format, however helpful, cannot replace clear thinking and organized writing. You still need to organize your ideas carefully and express them coherently.