

# ELECTRICAL ENGINEERING LAB REPORT

Developed by the Center for Global Communication and Design  
Revised 06/26/2018

## Objective

The objective of your experiment should be stated clearly and concisely, in one or several sentences.

*Example: The purpose of this experiment was to determine whether measurement of the changes in air-to-earth potential gradient could be used as a reliable and practical method of predicting local thunderstorms.*

## Equipment Used

Do not give details that are common knowledge in your field. Provide information of particular interest, such as the brand name and model of complicated apparatus or unusual equipment (e.g., Oscilloscope — Tectronix -Model 561B-CRO-158, Serial # XXXX).

## Procedure

For our purposes, it is sufficient that you state the source of the procedure that you have used. If you deviated from the given procedure, describe the procedural changes you made.

If you were documenting your research for audiences that were not familiar with the procedure, then you would need to state the procedure fully, in chronological order. You would provide enough information so that another researcher in your field could use your description to replicate the experiment.

## Results

Provide a sample calculation, using one complete set of data. Give the results of the calculations for the rest of your data. It is not necessary to recopy your raw data from the page where you first recorded it. Refer to it as necessary, pointing out trends and identifying special features.

State the results of your experiment clearly. Figures, graphs and tables may help to support your claims, but do not rely upon them exclusively to convey essential information. Any figures or tables used should be labelled and given a reference number (e.g., Figure 1, Input Frequency and Capacitor Value).

State all significant results explicitly and in verbal form. Organize your paragraphs around effective topic sentences. Use short, declarative sentences for the most part, but vary sentence length for flow and emphasis.

## Discussion

Your discussion is the single most important part of your report. In it, you will show your reader that you understand the experiment and can interpret it. Analyze and explain your results, focusing your attention on questions like these:

- What results were expected? What results were obtained? If there were any discrepancies, how can you account for them?
- Do any of your results have particular technical or theoretical interest?
- How do your results relate to your experimental objective(s)?
- How do your results compare to those obtained in similar investigations?
- What are the strengths and limitations of your experimental design?
- If you encountered difficulties in the experiment, what were their sources? How might they be avoided in future experiments?

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## **Conclusion**

The body of your report should end with a brief concluding statement, similar to an abstract, which summarizes the significant aspects and results of your experiment. It should tell the reader why the experiment is significant and what implications its results have for your field of study. If your experiment confirms or contradicts an established principle or theory, this should be stated clearly. In the plainest terms, your conclusion should answer the question, "So what?"

## **Back Matter**

Include references for your sources of information as appropriate.