

Brief guidelines for a Lab report EEET2493

Title of the session (you can be creative highlighting your findings)

Student name 1, s123456, Student name 2, s123456, Student name 3, s123456, Names are to be centered in Times (or Times Roman) 12-point nonboldface. Leave two blank lines before your Abstract

Abstract—Provide a summary of the session. What was done, what measurements were taken, brief methods, what calculations, brief conclusion. The Abstract should be approximately 250 words or fewer, italicized, in 10-point Times (or Times Roman.) Please leave two spaces between the Abstract and the heading of your first section. It should briefly summarize the essence of the paper and address the following areas without using specific subsection titles. **Objective:** Briefly state the problem or issue addressed, in language accessible to a general scientific audience. **Technology or Method:** Briefly summarize the technological innovation or method used to address the problem. **Results:** Provide a brief summary of the results and findings. **Conclusions:** Give brief concluding remarks on your outcomes. Detailed discussion of these aspects should be provided in the main body of the paper.

Index Terms—keywords, temperature, xxxx equation, etc.

I. INTRODUCTION

WRITE why is important to do this experiment, what background is needed, what technology has been used in this session, you can also talk briefly about what other technology exist but was not used here. Then explain briefly how the experiment was conducted, what measurements were taken, what technology is used (acquisition system, sensors, software), if calculations were done, what calculations were done, what decisions were made, and what the final result was (explained in a concise way with words). Writing good reports requires much thought, organization and editing but the rewards are great. Those students who can master good technical writing skills will find greater success and opportunity as professionals in industry.

You should become proficient at using your word processor for such items as page numbers, formatting tables, creating graphs, inserting Greek symbols, and using superscripts and subscripts.

Remember that once you graduate, industry will require you to write well. In some cases, you will be involved in writing proposals or possibly final design reports. It is possible that you will be required to assist in writing user or maintenance manuals. Certainly, you will always be required to write short reports and memos detailing your activities. It is our objective to train you to write well by the time you have graduated. An excellent style manual for science writers is [3].

You should become proficient at using the equation editor (Word has a built-in equation editor that can be accessed by inserting object. or you can use Latex editor).

Normal text is to be single-spaced in 10-point Times or Times Roman (or similar font), with 12-point interline

spacing, in the two-column format. The first line of each paragraph is to be indented approximately 1/4 inch (approx. 0.7 cm), and the entire text is to be justified – that is, flush left and flush right. Please do not place additional line spacing between paragraphs. Figure and table captions should be Helvetica 10-point boldface; callouts should be Helvetica 9-point nonboldface.

TITLE AND HEADINGS. The main title should be in Times (or Times Roman) 14-point boldface centered over both columns. In the main title, please initially capitalize nouns, pronouns, verbs, adjectives, and adverbs; do not capitalize articles, coordinate conjunctions, and prepositions (unless the title begins with such a word). Initially capitalize only the first word in first-, second-, and third-order headings. Leave two blank lines before author names(s)/affiliation(s).

II. MATERIALS AND METHODS

List of materials used and how these were used / connected (good opportunity to present block diagrams to show connections). Use good drafting practice when producing figures, graphs, drawings, or schematics and label them for easy reference. Include schematics for any circuits. If using latex use " cite" command to cite references [1].

What calculations were done. List and number your equations (Eq. 1) to be able to referred them in the text. Equations are centered and the equation numbers are right justified. The equation number is placed in (). Be sure that the symbols in your equation have been defined. See example Equation 1.

$$F = ma \quad (1)$$

Where F equals to force, m to mass and a to acceleration.

III. RESULTS

Show plots of any data collected and describe with words what your plots are showing. Describe the relationship between variables and time. Remember to number all your figures. This is the most critical part affect the technical achievement.

No picture, table, schematic, or graph should appear without a name (generally of the form Fig.1 o Table 1). None should appear without a reference to them by name in the main body of the writing. All figures and tables must be discussed in the text, including what it is, significant observations, and analysis.

Capitalize Table and Fig. any time they are accompanied by specific table or figure numbers. Examples: The measured data are plotted in Fig. 2. The figure shows a linear relationship

in..... The table shows vs. The data of Table 3

Student	Max Temperature
aabbcc	35°
eeeddd	54°
eeeddd	54°

TABLE I
TEMPERATURE MEASUREMENTS PERFORMED FOR SESSION 1.

Use your word processor to make real tables (i.e., boxed in, etc.). Center all tables and include a heading and caption with the appropriate table number below each table. For example, Table 1: Temperature measurements performed for session 1.

Figures must be centered, and the figure number and caption is centered beneath the figure. For example, Figure 1.

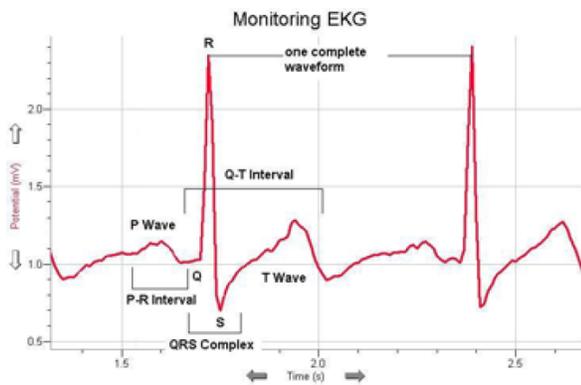


Fig. 1. Illustrations, graphs, and photographs may fit across both columns, if necessary. Your artwork must be in place in the article.

Always spell out table or Table. Give abbreviation of Figure, i.e., Fig., when used in the middle to end of sentence, but spell it out when used at the very start of the sentence.

All graphs must be done with a computer (i.e., spreadsheet software such as Microsoft Excel or even Matlab.). Do not include hand drawn graphs unless specifically instructed to do so.

Include a leading zero when a numbers magnitude is less than 1 (use 0.83 instead of writing .83).

Use your word processor for Greek symbols for common engineering quantities as $\beta, \pi, \gamma, \Omega$.

IV. DISCUSSION AND SUMMARY

Discuss any interesting result related to the materials used or to any claim from the introduction. Discuss your measurements using engineering terms (accuracy, precision, resolution, etc). Give technical conclusions. Restate the main objectives and how or to what degree they were achieved. What principles, laws and/or theory were validated by the experiment? Describe some applications of your results and comment any possible recommended future work.

APPENDIX A
HAND CALCULATIONS (OR NAME YOUR TITLE FOR APPENDIX SUBTITLE)

List any extra evidence such as photos of the session, that may help you support your claims. You can include all hand calculations, extra graphs and plots, simulation results, etc.

ACKNOWLEDGMENT

The authors would like to thank...

REFERENCES

[1] R. S. Kulkarni, S. L. Chavan, and D. B. Talange, "A green house electricity and heat generation: Solar PV/thermal panel-review," in *Proc. Int. Conf. Industrial Instrumentation and Control (ICIC)*, May 2015, pp. 680–682. DOI: 10.1109/IIC.2015.7150828.

Examples of references:

Example of data book:

[2] National Operational Amplifiers Databook. Santa Clara: National Semiconductor Corporation, 1995 Edition, p. I-54.

Example of textbook:

[3]M. Young, *The Technical Writers Handbook*. Mill Valley, CA: University Science, 1989.

Example of scientific journal paper:

[4] J.W. Smith, L.S. Alans and D.K. Jones, An operational amplifier approach to active cable modeling, *IEEE Transactions on Modeling*, vol. 4, no. 2, 1996, pp. 128-132.

Example of conference paper proceedings:

[5] J.W. Smith, L.S. Alans and D.K. Jones, Active cable models for lossy transmission line circuits, in *Proc. 1995 IEEE Modeling Symposium*, 1996, pp. 1086-89.

Example of Internet web page:

[6] Approximate material properties in isotropic materials. Milpitas, CA: Specialty Engineering Associates, Inc. web site: www.ultrasonic.com, downloaded Aug. 20, 2001.

List and number all bibliographical references at the end of your paper in **9 or 10 point Times**, with 10-point interline spacing. When referenced within the text, enclose the citation number in square brackets, for example [1].

Use IEEE format. Cite any external work that you used (data sheets, text books, Wikipedia articles, . . .). If you get a formula from a Wikipedia article, you must cite the article, giving the title, the URL, and the data you accessed the article as a minimum. If you copy a figure, not only must you cite the article you copied from, but you must give explicit figure credit in the caption for the figure: This image copied from If you modify a figure or base your figure on one that has been published elsewhere, you still need to give

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