

TECHNICAL MEMORANDUM

To: Dr. Selis Önel, KMU 396 Course Instructor
Cc: Course teaching assistant
From: Dennis Hardworker and Maya Joy
Subject: Writing a technical memorandum
Date: April 7, 20..

Summary

Use of memorandums are common in the industry. A memorandum, or shortly a memo, would be only one page, but a technical memo can be longer and include several sections as well as tables, figures, and other illustrations. In this sense, a technical memorandum is basically a shorter and more focused version of a technical report. In the KMU 396 course, students are responsible for conveying the results of their experiment by writing a technical memorandum and addressing it to the course instructor and teaching assistant.

The summary section is a brief recounting of the entire document including discussion/background, conclusions, and recommendation. It gives the reader an idea about what the rest of the document will include. The introduction should tell the reader what to expect, the main body of text should report the results, and the conclusions should reiterate the most important results of the study.

The main text part of the technical memo should not be more than four pages. It should not be overly wordy and there must be a balance of the use of tables, figures and pictures. The wording and sentences should be simple and clear, and the information must be to the point. Improper use of format or length may cause deduction of points. The memorandum in this course must be in single column format, with 2 cm margins at the top and bottom and 2 cm margins at the left and right. Text should be single-spaced with 12-point font size. Figures and tables must be captioned and titled with the same font size and any text on the figures or in the tables should not have font-size smaller than 10-points.

Introduction

A technical memorandum should be brief and is much shorter than a technical report. Your technical memo should start off with a brief introduction focusing on the objectives of your experiment and the basic procedures you employed. You do not need to provide general background.

All technical memos written for laboratory assignments must follow the guidelines listed below:

1. The technical memo should be written for an audience who is familiar with the experiment and who is primarily interested in the results and conclusions.
2. The memo must address specific questions listed in the laboratory grading sheet specific for each experiment including any figures or graphs that are requested. If you have made additional observations that are relevant to the experiment, include them in the memo.
3. The technical memo must be concise and to the point. Only include information that adds to the readers understanding of the experiment and any findings. Do not add unnecessary information to stretch the length of the memo.
4. All technical memos must be prepared and printed with a word processor using 12-point font size, in Times New Roman, single spacing, 2 cm margins, and appropriate labeling for tables and figures.
5. All technical memos should conform to the standard rules of the English language. Care should be taken to eliminate all grammar, punctuation, and spelling errors. Proof read the memo and use word's spell-check function before submitting it.

Experimental Methods and Analysis

The technical memo should have the following format:

1. Title page must include the names of all the people it is addressed to and their title(separated by semicolons), the names of all the people writing the memo, the date, and title of the memowith the name of the course (To; From; Date; Subject; etc.).

2. The body should include summary, introduction, experimental methods and analysis, results and discussion, conclusions and recommendations, and a brief bibliography. There should be a statement explaining the purpose of the experiment, a brief description of the procedure used, a description of results presented in accompanying tables and figures, and a list of conclusions drawn from the work. Sentences should be short, simple, and clear.

3. Appendix: All raw data and sample calculations should be included in the appendix of the report.

Experimental methods do not need to be detailed, but a brief overview of what equipment was used and the method should be summarized in a few sentences.

Results and Discussion

This is the section to present the results, which should be in the most clear and simple fashion possible using tables, graphs, charts, etc. In a technical memo, it is effective to discuss the implications of the results immediately after presenting them. You may discuss possible sources of error and compare the results to the literature or results published elsewhere.

Figures and tables in the memo must be centered and labeled correctly. Figure labels must be placed under the figure and titles must be placed above the tables. Equations must also be centered and numbered near the right margin. Each figure, table and equation should be numbered sequentially and referenced by that number in the text. The number of figures and graphs referenced in the text should be kept to a minimum (3 or 4) and should be used to present only the most significant results of the work. Other supplementary figures and tables may be included in the appendix. The following web sites provide examples of technical memorandums prepared by professionals in their field:

http://www.epd.gov.hk/epd/english/environmentinhk/noise/guide_ref/tm_des_area.html

<http://jplwater.nasa.gov/NMOweb/files/docs/misc/Final-Alternatives-Memorandum.pdf>

<http://vwrrc.vt.edu/swc/documents/pdf/TechnicalMemo.pdf>

<https://www.nysdot.gov/programs/repository/Tech%20Memo%20on%20License%20Plate%20Rationing.pdf>

<http://www.foresthealth.org/pdf/CH2M%20HILL%20Carbon%20Protocols%20Study.pdf>

Conclusions and Recommendations

The technical memo should end with conclusions drawn from the experiment and recommendations for future work. Remember that you are submitting the memo to your instructor (or your boss if you were working for a company), who knows the possible results of your work. Therefore, this part must clearly tell the reader the most important conclusions without any doubt and must explain whether additional work is necessary and what the scope of the proposed work would be. In the case of KMU 396 technical memos, your recommendations should focus on potential improvements to the experimental measurements you made.

References

This section must include a list of valid resources of information in the APA format and in the order as referred in the main text. Wikipedia is not a valid resource of information for this course, but academic or industrial journals, textbooks, handbooks and professional encyclopedias are. For example:

Appendix

If you would like to attach your calculations and reference data or charts, this is the place to present them. It may be useful for someone, who wants to reevaluate your data or check your analysis because the conclusions are controversial. Appendix does not provide main information, but provides only supportive information about the topic.