

3. Introduction

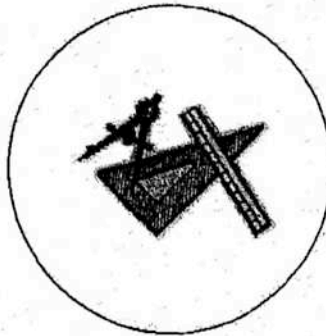
Purpose: to further summarize information and to create a sense of where this report stands within its respective field of research

- Write this section as if the abstract is nonexistent
- Describe the purpose and scope of the experiment
- Discuss relevant background information.
- Give a brief method overview.
- Define key terms.



4. Body

- Include all data from experiment(s): methods figures, etc.
- Include enough information so that someone else could repeat the procedures.
- Do not interpret the data or draw conclusions in this section.
- * **Graphs and charts can be shown within the text or compiled in the Appendix—it is the writer's choice unless specified by the professor.**



Special thanks to:
Professors Gans and Clark
and

The University of Rochester
Department of Mechanical Engineering

Arthur, Richard. *Engineer's Guide to Better Communication*.
Glenview: Scott, Foresman, 1984.

Gans, Roger F. ME 241. 23 Jan. 2006. 27 Mar. 2006
<<http://www.me.rochester.edu/courses/ME241/>>

Created by:
Elizabeth Campisi
Allison Goldstein
Lindsay Lewis

Engineering Conventions

Structure and Style of Writing Technical Reports

*50% of an engineer's job involves
clear concise communication.*

Structure

7 Major Sections

1. Title Page
2. Abstract
3. Introduction
4. Body
5. Conclusion/Recommendations
6. Bibliography/Footnotes
7. Appendices

Style

Common rules for effective
reporting in science and engineering

1. Title Page

Format: information horizontally and vertically centered

Content:

- Title (Use key words.)
- Author
- Professor
- Class

2. Abstract

Definition: a concise description of the report: the problem, methods, general results, and specific conclusions/recommendations

Purpose: to give the reader a condensed version of the report (It should enable your reader to determine whether or not the report is relevant to his or her needs.)

- Tell what you did, how you did it, why, what you found out, and what should be done now.
- Often, key terms are listed directly following the abstract.
- Ideal abstracts contain 100-250 words.

Tips:

- After writing the initial draft, try to trim the abstract by 30-50%.
- Write the abstract last
- Summarize each paragraph of the report and select the most crucial information (called writing a "précis").
- Rule of thumb: the abstract should be able to stand alone.

5. Conclusions/Recommendations

Purpose: to clarify the implications of the results of the experiment(s)

- Summarize the experiment and restate its purpose.
- Recommendations for further research or application of data should be made step-by-step.
- * **Do not include any new data.**

6. Bibliography/Footnotes

Pick a style and be consistent and correct. (Check with professors for preferences.)

For help with proper citation, visit:
<http://www.library.rochester.edu/index.cfm?PAGE=525>.

7. Appendices (as needed)

Purpose: to supplement material in the report by referencing other studies, showing lengthy equations, or presenting charts/graphs that were referenced but not shown in the body of the report

Style

Remember:

1. To be objective
2. To write simply and concisely
3. To state your argument concretely
4. To avoid jargon (e.g. do not use "activate" or "initiate" when you mean "begin")
5. To be passionate but not subjective
6. To use active voice (I/we) unless otherwise directed
7. That rules of standard English apply to technical writing, too

Final Instructions

- Be careful of plagiarism, especially in the introduction.
- The tendency is to underwrite, so be sure to include enough information so that the report is clear.
- Imagine writing for an educated audience outside of your field.
- Number the pages of the report.
- For further assistance and examples, visit Professor Gan's website:
<http://www.mc.rochester.edu/courses/ME241/>.