

## Engineering Project Report Requirements, ME 482

This report format emphasizes communication of the design process results. The following format should be followed, use of headings is required. The reports are to be bound hardcopies (BC Printshop can do the binding but requires some time to do so).

**Letter of Transmittal** (one page maximum, attached to the front of the report).

Objective (purpose), procedures, results and conclusions

Proper letter format (addressed to course instructor, courteous closing, signed, list of recipients (who's receiving copies such as all advisors), etc.)

**Title Page, Table of Contents, Lists of Figures, List of Tables and Page of Acknowledgements**

All properly done with complete information

**Executive Summary** (half page maximum: objective, procedures, results, conclusions)

**Introduction** (objective/purpose of project and report, summary of the report)

**Background** (what is currently understood – state of the art, literature search results, what is the context for this project, etc. “Set the scene” for the reader). At the end of the background, include concise descriptions (no more than a few sentences each) of what contemporary issues is addressed by your project, what your responsibility as an engineer is to address that contemporary issue, and what impact the engineering solution may have in a global and societal context.

### **Discussion:**

Clear problem definition and objectives

Design consideration table and a brief discussion of how each element affected the design, as applicable. Must include economic, environmental, social, political, ethical, health and safety, manufacturability, and sustainability. See course web page.

Design criteria table and discussion of criteria that are listed in the table (this is different than the “design consideration tables”)

Thorough evaluation of alternatives (include sketches) based on the criteria

Proper analysis and/or testing (details may be in an appendix – refer to them)

Decisions explained well

Design or test details explained well (includes photos, drawings/sketches, etc.)

One paragraph (minimum) discussion of at least one engineering standard utilized. Must include heading of “Engineering Standards”.

**Tables and Figures** (tables and figures should be embedded in appropriate sections such as background and discussion).

All figures and tables discussed in text, but are self explanatory

Numbered and properly titled, contain units, axis labels

Referenced (if information not created by authors)

Appropriate and adequate to communicate effectively! Use them!

### **Conclusions and Recommendations**

Conclusions (were objectives met? Briefly explain. No new facts, do not repeat contents of the introduction)

Recommendations for future work and/or lessons learned

### **References** (not as footnotes)

Appropriate quantity and quality

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Proper citation within report and proper reference section format at the end of the body

### **Appendices** (in whatever order makes sense)

All appropriate Design Decision documentation created throughout the project. There must be one DDD from each student created in the spring semester.

Action Item log

Other relevant information

### **Writing Quality**

Format: proper use of headings, page numbers, 12-point Times New Roman, etc.

Writing: clear, complete, and concise with proper mechanics (spelling, punctuation, grammar, and paragraph and sentence structures)

Proper tense, third person, passive voice, formal writing

Follow NSPE *Code of Ethics* (no “puffery”, self-laudation, etc.)

### **Submittals**

Every team should submit two bound copies of their complete report, one to course instructor and one to faculty advisor (if the faculty advisor requests a softcopy instead, then you do not need to provide a hardcopy to them). A third copy should also be provided to the industrial advisor – but it is not required. It is highly recommended that you produce bound hardcopies for each of the team members. They look nice for job interviews, and this should be something you are all proud to have.

Reports to faculty should be bound. Preference is for spiral bound, which can be done at the print shop. Engineering drawings larger than 8.5x11” should be correctly folded and placed in sleeves with the title block showing. They do not need to be included in the binding.

In addition, an electronic version (.docx) is to be submitted to the course instructor. You do not need to include the attachments.