“Bad writing makes bright people look dumb”
William Zinsser

Engineering Writing

ME 4054
Spring 2010
Prof. Bohlmann
The “Writing Design Reports” link in “The Department of Mechanical Engineering Writing Program” website provides a document that gives details on the design project report deliverables.

http://me.umn.edu/education/ug/writing/index.shtml
Design Report Sections

- Executive Summary
- Volume 1
- Volume 2

Increasing Detail
Executive Summary
Body of the Project Report

Volume I

The Core

Volume II

The Support
The Core (Volume I)

- Design Report
  - Problem Definition
  - Design Description
  - Evaluation
The Support (Volume II)

- Test results (physical experiments, computer simulations, hand analysis) in the IMRD format of a lab report
- Other concepts, including list of what was considered and why one solution was chosen. Include concept selection matrix
- Regulatory and safety considerations
- Environmental impact statement
- Bill of Materials
- Cost analysis
- Manufacturing plan (one-off or production)
Some Tips

• Editor should be well on their way now
  – Define format
  – Assign writing tasks
  – Review and comment on drafts

• Establish common terms
  – Glossary or figure calling out parts

• Consistent features and specifications
Editing Tips

• Consistent tense
• Third person
• For writing with equations, consult engineering text
• For figure and tables, consult a book
• For citations, consult an ASME or IEEE
• Read out loud
Resources

• “Writing Design Reports” link in “The Department of Mechanical Engineering Writing Program” website
  – http://me.umn.edu/education/ug/writing/index.shtml

• Hacker, A Writer’s Reference
  – A writing handbook; useful for checking rules like how to punctuate a list and when to use who versus whom

• Strunk and White, The Elements of Style
  – A classic book on how to write directly and clearly. A short paperback that belongs on every writers bookshelf

• Zinsser, On Writing Well
  – Another classic on writing without clutter

• UMN Student Writing Support

• Wilbers columns on writing

• RefWorks citation manager
  – Web-based application to manage the logistics of citations and reference lists. Available for free to UMN students, http://www.lib.umn.edu/site/refworks.phtml
# Final Report Sections Schedule

<table>
<thead>
<tr>
<th>Due Date</th>
<th>Deliverable</th>
</tr>
</thead>
<tbody>
<tr>
<td>March 4</td>
<td>Draft Problem Definition Chapter</td>
</tr>
<tr>
<td>March 11</td>
<td>Draft Concept Generation and Selection Chapter</td>
</tr>
<tr>
<td>March 30</td>
<td>Draft Design Description Chapter</td>
</tr>
<tr>
<td>April 6</td>
<td>Draft Evaluation Plan</td>
</tr>
<tr>
<td>April 20</td>
<td>Draft Design Evaluation</td>
</tr>
<tr>
<td>April 29</td>
<td>Final Design Report (Volumes I and II)</td>
</tr>
</tbody>
</table>

* Includes supporting appendices, as appropriate
Announcements

• Reminder: Thursday’s lecture by Prof. Durfee lasts 2.5 hours.

• I will provide a brief overview of the midterm exam following that lecture.