

**The University of Iowa
Department of Civil & Environmental Engineering
Spring Semester, 2000**

**53:085 Experiments in SMT
Write-up Guidelines for Lab Experiments**

In your profession, the advantage will go to those who can write good reports (solid technical content, proper English grammar, error-free spelling, and good visual style). In your reports, you should strive to be brief yet complete in your writing. Your objective is to convey information clearly and efficiently.

Required Reports

Throughout the semester, each lab group will be required to submit three reports. Due to the very significant role that each of these reports will play in your final course grade, you are encouraged to take each one very seriously.

The three reports will deal with the following lab experiments:

1. mixing of concrete specimens, slump testing, and air entrainment testing;
2. analysis of strength testing on your group's cylinders;
3. analysis of strength testing results for the whole class.

Report Format

The structure of each reported submitted should be essentially the same:

- i. Each report will start with a Cover Page, giving the experiment title, your group number, and the names and Social Security numbers of group members. The cover page will also be dated, and include the course name and number.
- ii. The reports should generally be short enough that a Table of Contents is not required. However, if your report tends to run long, then you may include a Table of Contents.
- iii. Each report will contain a distinct Introduction section. This will state briefly the objective of the experiment, and give the dates and locations of the experiments performed.
- iv. A Procedure section follows the Introduction. Here, you will describe how the experiments were conducted. Since all of the experiments will follow specific ASTM standards, you should not repeat the standard verbatim, but neither should you simply say, "We conducted a slump test according to ASTM Standard C143." Some additional description is required. So, be brief, but provide sufficient detail to make it clear what you did.
- v. A Results section follows the Procedure section. Here, you should carefully present the results of your experiments. Do not present reams of raw data here, as the raw data can be included in an appendix. The results section should include final data in a summary form using tables and possibly graphs. It will be up to individual groups to determine when graphical presentations of data (plots, charts) may be appropriate.

- vi. The next section is Analysis and Discussion. Not all reports will include a significant amount of analysis, but each will require some discussion. For this you may have to seek out reference information. For example, when reporting slump results, it makes sense to discuss your results in terms of typical (or expected) slumps for the mix you (thought you) were making. If you do include reference material from the literature, include complete citations as footnotes. The footnote should be sufficiently detailed that the reader can find the original source you have used for himself or herself. (So, include page numbers!) Again, you will have to determine if some form of graphical presentation is needed. If you don't include a graph, but one is really needed, you will lose points. Likewise, if you include excessive or unnecessary graphs you will also lose points.
- vii. The final section is Conclusions. This should summarize the findings of your report. Some people like to use bullets in Conclusion sections, which is fine if it is appropriate.

Further Suggestions

Finally, if you are in doubt about what needs to go in a specific report, ask. The specificity of the answer you receive will depend directly on how much you have already written. If you have not yet written anything, you'll simply be instructed to "read the notes." However, if you bring along a draft version of your report, you'll receive a more detailed review and suggestions.