

Geotechnical Design Project Management¹

Project Review Meetings:

Each group will meet twice a week with Prof. Roth.² ***The current project manager will run the first three parts of the meeting. The new project manager will run the fourth part and will be the project manager until the next meeting.*** Prof. Roth will participate in these meetings as a consultant.

The meetings are to be primarily managerial, not technical. They are to be centered on **project tasks**. The review meetings consists of four parts:

Part 1: Project manager selection: The next project manager is selected. Selecting this person at the beginning of the meeting allows them to prepare during the early parts of the meeting for when they will take over.

Part 2: Project tasks review: The group reviews the project tasks that were to be completed since the last project meeting. If a task has been completed, a quick review of the major result is given by the “primary person responsible” (PPR). If the task has not been completed, the PPR will discuss what delayed the task and what is needed for the task to be completed. This is not a time for excuses but a time to note roadblocks that may affect the project as a whole.

Part 3: Schedule review: The group reviews the project schedule as necessary, noting any completed tasks/milestones and any delayed tasks/milestones and ***the entire schedule is updated as necessary to address these changes.***

Part 4: Project task planning: Based on the progress to date and the updated schedule, the group determines what is the next set of tasks to complete along with the PPR and the due date for each task. (Note: The new project manager leads this part.)

Project Review Memos:

After each project review meeting, ***each of the project managers involved writes a memo documenting their portion of the meeting.*** The previous project manager prepares a memo documenting the project tasks that were to be completed in the previous period. He/she reports

A **project task** is an identified piece of work that needs to be completed. Each project task must result in some deliverable. The deliverable will be a project memo with an attachment documenting the work. For each project task, the group identifies a “Primary Person Responsible” (PPR). This person insures the completion of the task. In some cases the person will accomplish the task by themselves. In other cases the task is completed under their supervision. A due date is given to each task.

¹ Plagiarized shamelessly (but with permission) from Moor, S., and Drake, B. (2001). Addressing common problems in engineering design projects: A project management approach. *Journal of Engineering Education*, 389-395.

² The meeting will begin only when ALL group members are present. We will wait for a missing group member no longer than 1/3 of the scheduled meeting time (e.g., 10 minutes if a 30 minute meeting is scheduled). If a member is missing, the group meeting must be rescheduled. A group meeting that starts late will not be allowed to continue into another group’s scheduled time. If a meeting starts late and does not conclude in time, the meeting must be rescheduled.

on all completed and delayed items. For each completed task, he/she reports the major result and references the memo where the details can be found. For any incomplete task, he/she reports any important discoveries that caused the task to be delayed and the impact on the project as a whole. Finally, he/she reviews the performance of the team in relation to the schedule and provides an updated schedule.

The project manager for the upcoming period is responsible for an objective memo. This is a simple list of the next tasks (including any incomplete tasks from the previous period) and their deliverables, the PPR, and the date due. This memo results from part four of the review meeting.

These summary memos are issued by 9 a.m. of the morning after the project review meeting to all members of the group with a copy to the instructor.

Design Memos:

For all project tasks, the PPR must prepare a memo for the group portfolio and a copy of the memo to Prof. Roth. ***The memo must have an attachment that documents the work done***³. ***Memos that do not have attachments will not be reviewed by Prof. Roth and will receive no credit.*** The memo must be completed before the group meeting at which the project task involved is reported as completed. Prof. Roth will return these memos to the PPR with comments but no grade.

Memo Portfolio:

At the end of the design project, each student prepares a memo portfolio of the memos (both design and project review memos) that they have written (and that have been reviewed by Prof. Roth) as well as any last minute materials not previously reviewed by Prof. Roth. ***The portfolio should be submitted in date order with a clear table of contents.*** Students may include additional materials to make a case for their individual contribution to the project. These additional materials may be notes on previously undocumented work and notes on another student's memo describing some significant contribution they made to the work.

The portfolio will be graded based on quality, quantity, and timeliness (i.e., were memos turned in throughout the project or all at the last minute?)

Design Package:

The design package is the written documentation of your group's design project. It must include the following:

- An executive summary of your design and the construction methods used for the competition.
- A problem statement.

³ The attachment may be calculations, figures, photographs, drafts of documents written, or marked-up copies of text showing editing done in the process of finalizing the design package. If you edit documents on the computer you will want to use the tracking feature in MSWord to document your editing work.

- A summary of the design process. (Written for a non-technical audience. Readers should be referred to an appendix for detailed design calculations.)
- A complete description of how your MSE wall will be built. (Figures required.)
- Predictions concerning wall behavior during competition.

The design package will be graded as shown in Figure 1.

Grading:

The grade will be determined as follows:

Memo portfolio:	45%
Final group design package:	45%
Performance ⁴ in final competition:	10%

- Project review memos resulting from project review meetings must be completed on time (by 9 a.m. the morning after the project review meeting). If a student turns in a project review memo late, his/her final grade for the geotechnical portion of the course will be lowered by five percent (e.g., if the student was to receive 87% in the course, his/her final grade would be 82%).
- If a student misses a project review meeting, his/her final grade for the geotechnical portion of the course will be lowered by ten percent (e.g., if the student was to receive 87% in the course, his/her final grade would be 77%).
- Use of any tools available in the civil engineering laboratories (with the exception of shovels and buckets) without written approval by Prof. Roth will lower all team members' grades for the geotechnical portion of the course by ten percent (e.g., if a student on the team was to receive 87% in the course, his/her final grade would be 77%).
- If a team is working in the laboratory and does not clean up before they leave, the final grade for every team member on the geotechnical portion of the course will be lowered by five percent (e.g., if the student was to receive 87% in the course, his/her final grade would be 82%).
- When teams are working in the laboratory on trial designs, only one team at a time should be placing soil or loading their wall (to reduce dust issues). If multiple teams are working at one time, each team should be given a chance to test a trial design before any team tests a second design (i.e., you need to take turns). If a team does not show "good sportsmanship" in the testing of their designs, the matter will be taken to the Dean of Students for disciplinary action.

⁴ Performance as stated here, refers to the degree to which the students follow the guidelines of the competition. If a team completes the competition following all the requirements in a good faith effort to "minimize the amount of construction material used, while maintaining practicality in assembly and construction times," the team members will receive full credit for this portion of the grade.

Design Package Assessment - Geotechnical Engineering Design Project

Course: CE 372 Design II

Date: February 19, 2004

Members of group:

	Item	Grading weight	A	B	C	D	F	N/A	Comments
Mechanics	Format (margins, type size, reference format, appropriate use of sections, etc.)	5							
	Usage (punctuation, appropriate grammar, editing)	5							
	Figures/Tables (present information clearly and concisely)	10							
Body of Report	Paragraphs (topic sentence and coherence)	5							
	Clarity (writing is clear and concise)	10							
	Audience (content is appropriate)	10							
	Documentation (analysis of results is clear and conclusions follow from results)	5							
Appendices	Organization (logical presentation of analysis)	10							
	Problem statements	5							
	Calculations (complete and correct)	15							
	Referencing of methods (source of methods appropriately cited)	5							
	Neatness	10							

Figure 1: Grading for Design Package