LECTURE TWELVE: Design Review Preparation – The Final Thought

Remark: The purpose of this lecture is to review important rules for the mid-course presentations and prepare students for the event.

Introduction

We are almost half way to the end of this course and students should be instructed to undertake a few steps in preparation for their mid-course review. Particularly, they are required to complete the following assignments among perhaps several others, as the course instructor may deem necessary.

(1) Prepare, *in consultation with your technical faculty advisor,* your slides/transparencies, within our standard, and using ***five pages*** maximum. ***Remember you have only 15 minutes for your presentation!***

(2) Write, *in consultation with your technical faculty advisor,* your **final** report within our standard ***(as of today).*** In other words, use the style and procedures, which are described in class as of today, assuming that this copy is your final report, which is in fact the first draft of that report. Please note well that this report is prepared in order to support your presentation. That means, during your presentation, if anyone asks for additional details about your project, then you may refer to your report, section such and such, for an answer. This report cannot be informal and should contain all information in your slides and more.

(3) Make necessary arrangement with your technical faculty advisor regarding the best time that he/she is available for your demonstration. All within our allotted times as announced in class. Make the appointments for at least **two** sessions. If your advisor is not in town during that period, then tell him/her to send us a memo in order that we can finish the job in his/her absence.

(4) Make one **paper** copy of the above (1) and (2), plus the result of item (3), then bring all of those to the office of the course instructor by the deadline announced in class.

We are pleased to acknowledge that all students generally comply with most parts of these instructions. Upon receiving the above information a schedule would be developed for our "Mid-Course Design Review," and will be executed during the announced period.

Before proceeding further, let us remind you one more time that it is expected your ***technical presentations*** convey the following attributes:

(a) A complete description of your design project with all its components.
(b) All experimental data corresponding to each project must be given and analyzed as best as possible.
(c) All elements of this course, as pertains to your project, must be explained in a manner that the audience accepts your project as a genuine design project meriting your registered credits.

Advisory Evaluation

Students are informed that faculty members, who will sit in their presentations, are asked to comment on students' performance, as a guideline to them. In particular, the faculty members are asked to rank each group on a scale of 1 to 10 on the following items.

(1) The task's organization. (*Comment:* Please, pay particular attention to the contribution of each member. Unless stated explicitly, we assume that everyone contributes equally – but that is not necessarily true.)
(2) The presentation's clarity. (*Comment:* They must comply with the instruction. Please also pay particular attention to discussions about "lessons learned," if any. Also, look for prototyping and test plan.)
(3) The quality and marketability of the design, or at least its potential. Here, also we need to look for the relevant prototyping and test plan.
(4) The superiority of the selected method – if more than one method is given.
(5) Finally, is the team on a right track to complete the task by one week before the end of the second term. We need the last week for administrative work to finish the course and its final presentation.

Comments to the faculty: Thank you for your assistance, and please feel free to make your observation known in order that we adjust this process as deems necessary.

Final Thought

For many of you, this is perhaps the first experience to stand in front of your peers and professors to talk about anything. However, this is not just anything, it is rather a project that you are working on for several months closely. Thus, by now you should know it well enough to talk a few minutes about it from your heart. Make sure that your presentation conveys that fact. It must also show that you have mastered all elements of this course as outlined in these lecture notes.

Closure

The class ends with the following list of reminders, although many aspects of these issues are included in the above advisory evaluation form.

(1) Practice your presentation in order that your team can complete it in 15 minutes, we will be timing it.
(2) Arrange among yourself an order such that each person talks for a few minutes.
(3) During your presentation, look at your slides and the audience, while explaining your entire project as clearly as you can. As stated in class, you may choose a ***"Big Picture"*** approach, and give a ***"Top Down"*** presentation by defining the overall organization of the project and the role of each member, all the way down to whatever technical details you want to explain.
(4) You must decide, within the allotted time, how much technical detail you must include in your presentation. Note that it is not trivial to say the right amount, and to demonstrate such an understanding and training is a major part of your presentation, which your grade depends on that.
(5) Do not forget to state your ***technical problem*** and ***design specification***. You must convince the audience that your selected method (often there are more than one method or solution for most engineering problems) is the best approach and most likely to be completed on time.
(6) It is important that you give a brief explanation of the qualitative and quantitative aspects of your design in a manner that everyone can understand your way of selecting the solution approach and parts on your project.
(7) Talk about the cost and budget as much as you can at this stage.
(8) Do not neglect to talk about other elements of design as pertains to your project.

Keep these thoughts in mind, as we advance toward the final presentation, and add more elements to this list. ***A successful design project is the one that works and is built cost effectively***. Finally, if the slides that you may have dropped earlier in the course instructor's office need major changes, based on the above comments, please bring a revised draft before the start of these presentations. Please be advised that if you decide to change your slides those changes must be consistent with your report. When presentation starts, we will not allow you to replace or adjust your slides based on others' slides. Next week, during our regular meeting, the results of your presentation and the comments on your intermediate final report will be given to you.

Essential thoughts in this lecture

Issues.	Applicability to your project, if any.
Each and every piece of these lecture notes forms a tile on the final mosaic of this course. Try to assemble those such that it portrays your contributions to the underlying project, and your learning of issues discussed in this course. You may wonder, why are we repeating the above? The answer is very simple. It is that serious, and we cannot say it any better than the above!	Obvious! However, you may claim that, for instance, your project has nothing to do with certain issues discussed in class. Clearly, if that is the case, then you must justify your claim.
Do you want to add anything else?	Please elaborate.

To assist you with a potential checklist, which you must develop eventually, we offer the following. This is a partial list of issues that you are expected to answer at some point in this course. Please feel free to add to this list.

How duties were shared?
Did they explain their problem statement well?
Did they look into various solutions?
How did they pick their solution?
Did they analyze that solution?
What is their technical approach?
Are cost breakdown and budget included in their talk?
Are schedules and planning with critical dates included?
What special resources are required, and who would be responsible for procurement?
Have they included a test plan?
Did they consider various design constraints?
Have they evaluated the impacts of other design elements as described in these lecture notes? For instance, Lecture Note Eleven.
Last, but not least, have they cited sufficient number of references in their talk and final report?

Good Luck!