

6.013 Final Project Guidelines

Submission Process:

- Please upload both your project final report document AND your demo/presentation document **by 3pm on Wednesday May 17**. (warning: the website will stop accepting documents promptly at the deadline, software enforced).
- Please upload all your documents here: <https://www.dropbox.com/request/DEznjDrpWEQZeRjgts3p>
- Name your file as ProjectTitle-Report and ProjectTitle-Presentation where ProjectTitle is a short title of your project. (Do not use the name of team members as title)
- This is a team effort: one submission per team.

Final Report Formatting:

- **MAX 2 pages** with comfortably readable fonts and lines spacing: strictly enforced (including everything e.g. names, figures, references, etc.) with penalties for any violations. The safest and strongly encouraged way to satisfy our comfortably readable and formatting requirements is to use one of the IEEE templates:
http://www.ieee.org/conferences_events/conferences/publishing/templates.html
- Organization: Abstract, Introduction, Approach, Results, Conclusions and References.
 - Abstract: This is usually the ONLY thing that students next year or anybody potentially interested will read to decide if they want to spend the time reading the rest!!! It is also what publication search engines use to extract keywords for user searchers. Think of just those two goals when you write this!!!!
 - Introduction: describe the problem (not the solution), motivations, cite related work.
 - Approach: describe your technical claims and approach for solving the problem so that ideally another team next year could replicate most of it and build upon it.
 - Results: think of showing plots and data that prove and support your technical claims. Use figures captions and labels very efficiently: some readers only read abstract conclusions and figure captions!!!!!!!!
 - Conclusion: Did it work? Summarize quantitatively how well. Did it not? Summarize Why? Do NOT repeat the abstract! Make it so that a reader who looks at ONLY the abstract, the conclusions and the figures will get the key messages of the project in short. This means that in the other sections (Introduction, Approach and Results) you do not and should not repeat sentences, facts and points you made in abstract and conclusions.
 - References: make sure to cite not only published references but also any work or inspiration from previous or current 6.013 projects and teams including member names.

Final Report Grading Criteria (contributing as 10% of overall course grade:

- Reports will be graded by members of the 6.013 staff.
- All members of the team get the same grade (out of 20 points):
 - Understanding of 6.013 Technical Concepts (0-8),
 - Clear/Concise Results (0-8),
 - Overall Quality of Report (including Formatting and Language...) (0-4).

Demo/Presentation Format:

- **MAX 8 minutes** (including everything e.g. walking up, setting up, showing demo/presentation, answering questions, cleaning up) with strictly enforced 5% per minute penalty rate for violation.
- Signup for a time slot here:
<https://docs.google.com/spreadsheets/d/1glKnt1qhPc2-J0l4SxzIDzDV2aFQUARcPfpGQU5Dd8Y/edit?usp=sharing>

Demo/Presentation Grading (contributing as 10% of overall course grade):

- Imagine that in 3-6 months you will be interviewing for a job. In most if not all such situations you will be asked to describe a project you contributed to. Hence we thought that your efforts in these last few days should be aimed at impressing those possible future interviewers. And we will provide a relatively safer environment to get some feedback on your project and the way you manage to sell it directly from industry experts that could be interviewing you down the road. A critical portion of your tasks will be to try and guess what those industry experts might value more from your 8 minutes in front of them. Our staff will be on “your side” and we’ll try our best to try and help you guess what the judges might be looking for. But how to present and what to focus on will be ultimately your own responsibility and one of the skills you need to start practicing sooner rather than later in your professional life.
- Here are some information and personal (i.e. potentially wrong or biased) suggestions to help guess what the judges could be looking for:
 - So far we have judges for each of these companies: Analog Devices, Analog Photonics, Bolt, Draper, Keysight, Lincoln Laboratory, Macom, NanoSemi, PnP Research, and ST Microelectronics. Our suggestion is to look up what those companies do. We did try to invite experts that understand and work with some aspects of electromagnetics we covered in the class. But based on what the company produces or mission or its size they might value different things. Make sure you consider as many as possible of these elements. Where to find information? How about the internet?
 - 8 minutes total: imagine that the clock stops and you just finished and the judges do not have any time available to ask their questions and show you how smart “they” are... I don’t think they will reward you for that... actually they might be VERY disappointed... so do make sure that not only you walk out after 8min to avoid our penalty but also make sure you start engaging questions from judges early enough that they will be happy and satisfied by the time 8min end comes! Just my opinion... but I can bet money on it :)
 - You are free to decide your format... but again... my impression is that given that you do have hardware... you should show it to the judges, rather than hide behind lots of powerpoint slides. I would for sure recommend you spend most of your time on a live and interactive fun demo rather than on booooooring slides! I can bet money on this one too :)
 - The judges are all electromagnetic experts so I bet they WILL want to see what technical ideas you have and what you understand.
 - A word of advice: regardless of how technical a person is, nobody in my opinion likes to sit through 5-6 minutes of technical description of how you solved a problem without understanding first clearly what WAS the problem you wanted to solve and why it might be important, impactful or plain out fun and cool !
 - The judges are also people that have to present projects themselves all the time to get funding or to justify funds they got, so they are well trained and appreciate excellent clear concise communication skills... my guess....
 - Working in industry more often than not means working in teams and I am guessing that the ability to work effectively in teams and split the job fairly based on each person individual skills is highly valued by the judges... you could find ways to showcase those aspects

- Finally... but potentially even MOST importantly... judges are not only technical experts and teamwork managers... they are also people... and as such they be grading you more positively if you also managed to entertain them and have “fun”... I would consider for sure that aspect too if I were you... we'll be available on Tuesday to help you with technical and non-technical aspects.