ENGR 480 Spring 2022

Final Proposal (Report and Presentation)

The concept of this report and presentation is that your team is describing a problem, the domain of the problem, your ideas to solve the problem, and the most likely concept that you will follow next quarter during the design phase. The report and presentation follow the same format. The report should have sufficient evidence to support your claims. I would expect the report to be between 15 and 30 pages (double spaced, single sided). Please turn in a physical copy on Thursday. The presentation is 15 minutes. Here are the most important sections/slides to include (you may include additional sections if they make your case stronger):

1. Title (project, team, date . . .)
2. Problem Definition and Background
    a. Problem Statement
    b. TAM/SAM/TM (describe the scale of the problem in terms of how many people experience the issue and want to do something about it)
    c. Customer Persona (describe the key characteristics of your typical customer, how will these characteristics influence your design)
    d. Codes and Standards (what are relevant codes and standards that must be followed during the design phase of this project? what aspects of the design do they influence?)
    e. EDS and Constraints (what are your design specifications and what are your constraints? Specifications are specific things that the design must exhibit – specific material, color, . . ., constraints are limits that quantifiably measurable – cost, weight, size . . .)
    f. IP (describe competing/existing intellectual property)
3. Concepts
    a. Show at least three concepts that may solve your problem
    b. Engineering feasibility calculations (“back-of-the-napkin” calculations/simulations that help determine if a concept is doable, have one of these per student on the team)
    c. Pugh Chart/Decision Matrix showing which of the concepts is most likely to succeed
4. Proposed Design
    a. Describe the concept that you plan to carry into the next quarter to be designed and prototyped
    b. Provide a rough budget for the prototype
        i. An estimated bill of materials
        ii. Vendors for the parts
        iii. Cost of the prototype
        iv. Any special tools/equipment
5. Conclusion/End