

Guidance for creating Presentation Materials for the Capstone Design Expo

The Capstone Design expo is a celebration of innovation, creativity, and the culmination of your academic journey, showcasing your ability to apply your skills to real-world problems and produce impactful solutions. You will have the opportunity to present your work and yourself to a wide range of audiences which might include potential employers, investors, customers, end-users and the public.

The materials you create and share for the expo are intended to enhance your team's chances of impressing the judges and winning the expo. Uploading materials online constitutes public disclosure and so please plan ahead to protect your inventions. Discuss your Intellectual Property protection strategy with your sponsor (if applicable) and your instructor. Your lab instructor will dictate the requirements for grading and the associated deliverables.

The following materials must be **uploaded** (https://capstone.gatech.edu/expo_register) on the expo website by 5:00 pm on the *business day before the expo* (if you wish for the judges to review this material before visiting your table).

1. **POSTER:** Upload your poster as a **.jpg** or **.jpeg** file for your team's submission. Your poster should be legible when viewing on your computer screen at 100% zoom settings. The size of your starting canvas could be 16 inches wide by 12 inches tall (which is 4:3 aspect ratio). Please make sure the file size is **less than 1MB**. You may use free online image compression software to resize your poster files. Plan to **print your poster** if you wish to use it during the expo. It is recommended to place your table numbers on the top right of the poster. Team numbers can be found here: <https://capstone.gatech.edu/projects>
2. **VIDEO:** Post a YouTube link for your **4-6 minute video**. The video must be uploaded on YouTube, and permissions must be set to ensure anyone can view it (do not set it as private).

Judging Rubric: (full version here: https://capstone.gatech.edu/expo_rubric)

Teams will be scored on a 1-5 scale, 5 being the best, in the following four equally weighted categories:

A. **Problem** *Was the problem worth solving?*

Score of 5 can be awarded if the team presented a significant potential impact by using quantitative and/or qualitative metrics to justify the project.

B. **Solution** *Proof that the solution works*

Score of 5 can be awarded if the team successfully validated all critical aspects of the designed solution (through physical prototype and/or simulation)

C. **Innovation** *Is the proposed solution creative?*

Score of 5 can be awarded if the solution/recommendation is original, non-obvious

D. **Presentation Energy** *Did the team exude energy to get you excited?*

Score of 5 can be awarded if the team incited investment in the problem/solution/project

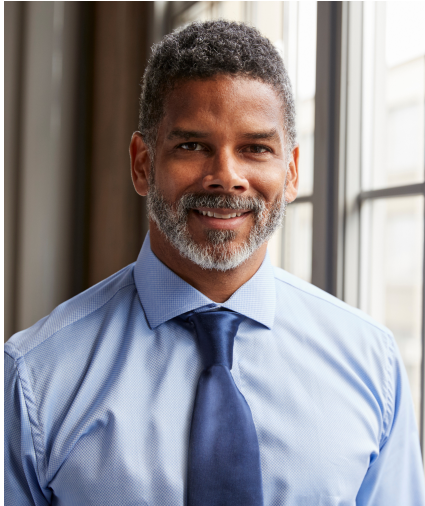
Each team will be randomly assigned 4-6 judges based on judges' major preferences. However, there will be a minority of judges who are not experts in your specific major/discipline. Hence, while your presentation materials for the expo (poster, video, oral pitch, etc.) would have substantial technical depth for an expert to understand and appreciate, they *should still be accessible to a non-expert*. Your first task when engaging with any audience at the expo is to quickly assess the audience and adapt your presentation so that it is tailored for them.

Understanding your audience's characteristics, expectations, and preferences provides the foundation for crafting communication that is both appropriate and responsive. Therefore, communication is only ever effective or ineffective based on its ability to cater to its intended audience.

This is why we provide you, i.e., student communicators with audience avatars; you cannot make effective communication decisions without knowing the scenario or the audience.

When you are communicating with your audiences, remember that you are also presenting a (hopefully knowledgeable and approachable) version of yourself. While we can design our own images through our communication choices, we must also acknowledge that, often, the audience or situation carries preconceptions about who we are or should be. Communicators must be aware of and adapt to these preconceptions when crafting their messages. This concept is important for students to understand as it underscores the dynamic nature of communication and the role of perception in shaping interactions. It encourages you to be proactive in communicator design while remaining responsive to the audience's expectations and existing perceptions.

Expo Avatars



INDUSTRY EXPERT



PROSPECTIVE GT PARENT

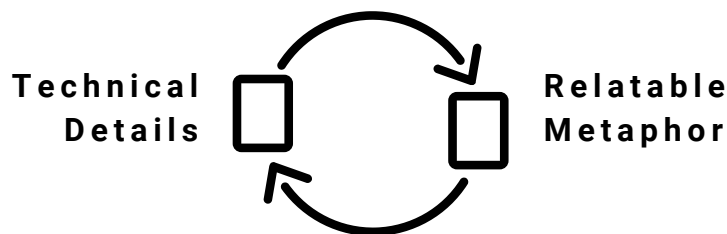


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Communicating to Diverse Audiences

At the Expo, you will need to be flexible in your communication so that you can respond to differing audience needs.

While you will have a beginning, middle, and end to your communication, think about how you might swap details and metaphors for different audiences.



Practice Empathy

Simplify Visual Aids

Create Levels of Detail

Focus on Common Ground

Try to segment your content to address different aspects that appeal to each avatar. For example, you can have sections that focus on practical application, technical details, and real-world impact to swap out for different audiences without needing a completely new pitch for each.

Because you have been asked to communicate to a wide range of audiences, you can imagine all of the presented audience avatars as judges for your team.



INDUSTRY EXPERT

Marcus Johnson

Intellectual Property (IP) Lawyer

Background: Holds undergraduate in ME and has over two decades experience as an IP lawyer.

Company: Works at Apple Inc. safeguarding intellectual property and patents related to cutting-edge technologies and innovative products.

Role: Represents Apple Inc. in various IP-related cases and is well-versed in tech industry IP matters.

Values: Committed to ethical practices, legal compliance, societal and environmental positive impacts, and the importance of clear and comprehensive documentation; values projects with a high level of legal awareness, where pitfalls are addressed effectively.

Annoyances: Frustrated by projects that lack originality, fail to acknowledge legal issues and potential pitfalls, or neglect to establish a clear connection to industry interests.

Primary Interest: Innovation first, Solution second.

“Excellence in problem-solving requires a keen understanding of the problem’s impact, a thorough validation of solutions, and a spark of creativity that inspires innovation. Just remember to respect the boundaries of intellectual property and ethics.”

Marcus believed in the power of problems that were truly worth solving, and his standards were high. He sought presentations that presented not just the problem but its potential impact, backed by compelling quantitative and qualitative evidence.

Innovation was paramount for Marcus. He wanted ideas that broke free from the ordinary and presented fresh, creative solutions. Rehashing existing concepts didn’t capture his attention; he was in search of the spark of creative thinking, expecting students to demonstrate in-depth understanding of their projects, highlighting innovative solutions and their real-world applicability. Yet, he was acutely aware of the need for students to strike a delicate balance between creativity and legal compliance, and he worried that some presentations might err on the side of risking the company’s intellectual property or infringing on existing patents.



PROSPECTIVE GT
PARENT

Mary Turner

Stay-at-Home Mom & Pastor's Wife

Background: Rooted in her small, southern town, and has limited exposure to engineering and academia.

Role: Caring parent with a child in high school who is considering a career in engineering. She must look out for his best interests.

Values: Cherishes community values, traditions, and her son's happiness. Values practicality; seeks reassurance that her child's aspirations in engineering will give him success and harmonize with her family's core principles.

Annoyances: Annoyed by a disconnection from real-world practicality and passionless presentations. Frustrated by a lack of relatability, where presentations don't address the challenges that concern her lived experience. She is also bothered by presentations that come across as overly academic or elitist.

Primary Interest: Presentation first, Problem second.

"I want you to explore your engineering dreams with open eyes and a full heart. Your journey should take you where you want to go, but always remember where you come from, and let it guide you forward."

After viewing the engaging Georgia Tech Capstone Design Expo videos, Mary had the confidence to make the trek from Guysie, GA (~4hr drive) to the expo with the hope she and her son would be able to enjoy the presentations as non-experts.

As Mary stepped into the expo, her heart brimmed with hope and trepidation. She wanted to be able to guide her son as he prepared to make college decisions that would influence his future success and happiness. Adding to this pressure, she had an additional concern - what if the presentations were too technically complex for her to grasp?

She sought presentations she could connect to as well as a way of seeing how her son could fit into this environment. The academic atmosphere left her feeling somewhat out of place, her anxiety about understanding the presentations gnawing at her. But, as time progressed, she was drawn in by the energy and enthusiasm exuded by the student teams. They sparked excitement and engagement, which made her feel like her son's chosen path was one full of joy and importance.



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Sarah Mitchell

Mid-Level Manager

Background: Holds a Bachelor's degree in engineering, has been with current company for over a decade.

Role: Results-driven manager who oversees projects in her department. Her responsibility is to ensure the success of projects, justify the allocation of resources and time, and present concise updates to her manager.

Values: Final deliverables; practical and efficient project management that communicates and justifies resource and time needs quickly.

Annoyances: Annoyed with presentations that dwell on class assignments, social impact, or an extensive explanation of the design process. She prefers presentations that get straight to the point and address her specific requirements.

Primary Interest: Solution, solution, solution.

"I appreciate your enthusiasm for design options, but we need to stay laser-focused on the practicalities and resources. Let's ensure our solutions align with the company's goals and avoid any unnecessary detours."

This semester, Sarah's company sponsored a student capstone design team, and the team she's mentored needs to meet her high expectations.

The displays and presentations at the Expo didn't distract Sarah. She was here to see the results of her collaboration with the student team and **judge other teams**. As she moved through the expo, her discerning eye quickly assessed the projects on display, filtering out presentations that didn't align with a practical and results-driven approach. Her hope was pinned on the team she had supported and mentored, and she was determined to see a final fabrication prototype and a scalable implementation plan that would meet her exacting standards.

Sarah knew she had a reputation for being demanding, but she saw herself as a guide, helping students transition from academia to the corporate world. As she ventured deeper into the expo, Sarah hoped to interact with teams that had embraced her results-driven approach and would present a solution that met her high standards.