Capstone – Create and Build

For students who choose to create and build a product for their capstone, applied design is a useful process to explore. This process is characterized by the development of an understanding of the people for whom students are designing products and can be useful in grappling with challenges and/or functionality that require creative ideas and hands-on approaches.

Process

Understand and define the context

- Begin with a challenge and/or functionality and the intended user(s) in mind (this will better inform how the applied design process unfolds)
- Enhance understanding of community needs by engaging in empathetic observation, including communication with potential users to explore their needs and wants; practice active listening
- Contemplate the intended purpose of the product and the perspectives of potential users to envision a user-friendly product that addresses the identified challenge or functionality
- Identify the success criteria for the product and its design process, as well as any constraints to account for, such as budget, available materials, community impact, and environmental care

Ideate, prototype, and test

- Experiment and explore possibilities, taking creative risks in generating ideas and adding to others' ideas in ways that enhance them
- Screen ideas against the success criteria and constraints; maintain an open mind about potentially viable ideas throughout the design process
- Research sources of inspiration and information to develop a design plan that includes key stages and resources
- Create prototypes, making changes to tools, materials, and procedures as needed; document iterations of prototyping
- Seek feedback from identified sources (for example, from a field expert) and communicate with potential users about design ideas and prototype(s); apply the feedback and new information to enhance the design

Make and share

- Use appropriate tools, technologies, and materials to make the product
- Share progress while creating to enable ongoing feedback and to adapt the design as needed
- Be mindful of unintended negative environmental impacts and use materials in ways that minimize waste
- Decide how and with whom to share and/or promote the product
- Evaluate the success of the product design, explaining how it reflects the criteria and addresses the challenge and/or functionality
- Reflect on the creating and making process, building and elaborating on what worked well and what might be done differently next time
- Reflect on newly acquired competencies and skills and how they can be applied in other contexts