Design Project Overview Form

Engineering Design Teams

Overview

TO BE FILLED OUT INDIVIDUALLY FOR EACH PROJECT. All projects and all design team work that require prototyping and/or funding (R&D, etc.) must be documented through these project forms. All prototyping projects require approval every Fall regardless of the project timeline. Ensure that each project also includes a Timeline, and corresponding Funding Spreadsheet outlining associated expenses.

These prototypes can be defined as specific projects. Separate projects aim to create distinct physical items. The items cannot be part of a final larger piece. For example:

Separate Projects:
- Two separate cars
- Respiratory rate monitor and a phototherapy monitor
- Two separate experiments contributing to different research projects

Not Separate Projects:
- A brake system and a chassis
- Subsystems of the same vehicle
- Bacteria culture and research paper based on findings from the experiment

SuperApp has no cap on the number of Design Projects submitted, **all Design Projects a design team is working on must be submitted for review**; however, the rules are different for Projects submitted for Professional Activities Funding (PAF). More information on that can be found here.

Project Overview

Contact Information

Design Team	
Sub-team (if applicable)	
Team Email	
Secondary Team Email	

Project Information

Project Type	
Project Name	

Provide a description of your project/prototype:			
In your project description please provide a technical overview of your design project and high level goals, further down we will be asking additional details about your goals, timeline, competitions etc. Please keep in mind the people reviewing these applications may not have an engineering background.			
Original Start Date (mmm-yyyy)		Projected End Date (mmm-yyyy)	
Project Length (in months)		Current Project Status	

2024-08-08

Faculty Advisor Approval (Project Specific)

Faculty Advisor Name	
Email	
Department	
Other Faculty Advisor Name	
Email	
Department	
There is verification included in the SuperApp Submission Form that demonstrates our faculty advisor has reviewed this project.	

Project Outcomes

Project – Team Alignment

Please explain how the project contributes to your team's purpose and overarching goals.

External Deliverables

Industry/Faculty Collaboration (If applicable)	
Partner Organization	
Primary Point of Contact	
Email	
How does this collaboration benefit them?	
How does this collaboration benefit your team?	

Competition Information (If applicable)		
Competition Name 1		
Location		
Dates *(dd-mmm-yyyy)*	Start:	End:
Competition Website		
Goal of Competition		
How does attending this competition benefit your team?		
Is your team committed to going this year? If not, what year?		

Competition Information (If applicable)		
Competition Name 2		
Location		
Dates *(dd-mmm-yyyy)*	Start:	End:
Competition Website		
Goal of Competition		
How does attending this competition benefit your team?		
Is your team committed to going this year? If not, what year?		

If you have more collaborations or competitions, submit the additional information using the table format from above on a separate PDF.

How do you plan to meet deadlines and standards for this project?

Internal Deliverables

Only fill out this section if your project does NOT have any competition/conference with it.

What is the internally set goal for your project? If your timeline is longer than one year, please explain what you wish to accomplish by next August. Without external expectations how do you plan on keeping your team on track?

Current Year Learning Goals

Please detail the specific objectives you will be prioritizing this year. (50 words)

Project Timeline

Project Plan

Briefly describe your project's timeline, including key milestones for each phase (e.g., Ideation, Prototyping, Testing, Manufacturing, Completion). If your project includes multiple sub-projects with separate milestones, please detail these sub-projects and their respective milestones. Additionally, provide a summary of the expected expenses for the coming year, ensuring they align with the current year's budget. *You are free to use this template or submit one of your own according to the duration and specific needs of your project.*

Your timeline must include:
- Start Date
- End Date
- Monthly breakdown for this fiscal year (this September– next August)
- If start date is before September include milestones achieved up to this year
- If end date is after next August include future plans
- Expected expenses noted at the time when the purchases will be made

Submit it as a PDF under the "Timeline" dropbox in the SuperApp webform.

Project Lifecycle

Location of prototype testing if not in regular workspace	
Methods used for testing	
Goal of testing/Validation	
Plans for project at end of its lifetime	

Risk Management – What are the risks associated with your project?

Legal Risks – Project activities that require support/management from APSC PD

	Will your proposed activities require any new permissions/resources from APSC?
	Are you making financial commitments with external parties?
	Are you or have you signed a contract or permit for this project?
	Does this project require any additional insurance coverage for competition?
	Does this project require a non-disclosure agreement?

Please provide details (including any perceived legal risk not mentioned above):

Financial Risk

	Are you receiving funds/in-kind services from sponsors that require a formal letter or permission from UBC?
Provide details:	

	We have ensured that all members who make purchases on behalf of this project aware of the purchasing and reimbursement guidelines and requirements
How have you ensured this?	

Any other perceived financial risks?

Project Risk

The project risk section aims to outline the potential risks surrounding project planning and risks that may occur during the project process.

Severity

Likelihood	1 Insignificant	2 Minor	3 Significant	4 Major	5 Catastrophic
5 Almost certain	5 Medium	10 High	15 Very High	20 Extreme	25 Extreme
4 Likely	4 Medium	8 Medium	12 High	16 Very High	20 Extreme
3 Moderate	3 Low	6 Medium	9 Medium	12 High	15 Very High
2 Unlikely	2 Very Low	4 Low	6 Medium	8 Medium	10 High
1 Rare	1 Very Low	2 Very Low	3 Low	4 Medium	5 Medium

For the above categories, descriptions are as follows:

Likelihood
- **1 - Rare:** Highly unlikely to occur, only in exceptional circumstances (0-10% chance).
- **2 - Unlikely:** Unlikely to occur, could happen occasionally (10-30% chance).
- **3 - Moderate:** May occur, neither rare nor certain (30-50% chance).
- **4 - Likely:** Likely to occur, more probable than not (50-70% chance).
- **5 - Almost Certain**: Almost certain to occur regularly (70-100% chance).

Severity
- **1 - Insignificant:** Minimal impact with no effect on objectives or operations, easily manageable without much effort.
- **2 - Minor:** Noticeable effects that might cause some inconvenience but do not cause significant disruptions. Require a moderate level of attention and resource allocation to manage.
- **3 - Significant:** Serious impact, affecting performance, requires attention – can cause substantial disruption or delays.
- **4 - Major:** Severe consequences that can cause significant disruption - has high potential to impact the organization negatively and require immediate and substantial resources to address effectively.
- **5 - Catastrophic:** Extremely severe consequences that can result in major operational failures, legal issues, or team's status. Catastrophic risks need urgent and extensive resources and management.

Examples:

Risk	Likelihood	Severity	Rating	Management	Contingency	Source
What is the risk?	1-5	1-5	From the box on table	How do you plan on managing it?	Do you have a back-up plan if it occurs?	Where is the risk coming from?
Unable to ship prototype on time	*2*	*5*	*High*	*Reorganize project timeline to ensure completion before shipment date*	*Reorganize for a later shipment date or drive prototype if needed*	*Construction delays, poor project planning, etc.*
Delivery delays for materials	*2*	*2*	*Low*	*Order supplies well in advance*	*Reorganize construction timeline to accommodate for delays*	*Material shortage, Poor planning, etc.*
Student gets a minor injury when handling tools	*3*	*3*	*Medium*	*Provide proper training and proper PPE*	*Report injury to APSC and treat wounds as needed*	*Improper handling, freak accident, etc.*
Severe chemical burns from spill	*2*	*4*	*Very High*	*Enforce use proper safety procedures, PPE, and have spill response protocols*	*Treats injuries as needed (APSC Safety, 911, etc.) And reporting incident*	*Improper handling, improper chemical storage, etc.*
Minor formatting error in project documents	*1*	*1*	*Very Low*	*Proofread documents before finalization*	*Determine error and correct it*	*Grammatical or spelling error*
Student suffers life-threatening injuries from heavy machining accident	*3*	*5*	*Extreme*	*Implement strict safety protocols, provide thorough training, and regularly inspect machinery.*	*Call 9-1-1 immediately*	*Damaged machinery, improper usage, etc.*

Complete the <u>table below</u> on how your team plans to address and mitigate any project risks.
- **Physical prototyping risks:** transportation and procurement of construction resources, storage, active construction work and testing, access control and security, waste management.
- **Other risks:** scheduling/inability to meet deadlines, digital storage, lack of active team members, shortage of resources, etc.

Risk	Likelihood	Severity	Rating	Management	Contingency	Source

If you have additional risks you can download the template here. Submit it under "Optional Attachments" on the Webform.