

# Title: Low-Interference Wheelchair Footrest

Date: 2/22/2024

Client: Dan Dorszynski

Advisor: Dr. John Puccinelli

Team:

Charles Maysack-Landry — Leader

[maysacklandr@wisc.edu](mailto:maysacklandr@wisc.edu)

Jayson O'Halloran — Communicator

[ohalloran2@wisc.edu](mailto:ohalloran2@wisc.edu)

Haoming (Bobby) Fang — BPAG

[hfang45@wisc.edu](mailto:hfang45@wisc.edu)

Sam Tan — BWIG

[stan68@wisc.edu](mailto:stan68@wisc.edu)

## Problem statement:

The project aims to innovate wheelchair footrest design to overcome the limitations of current models which are often cumbersome, heavy, and restrict leg movement or access to the ground. The goal is to create a footrest that is lightweight, easily detachable, and foldable, enhancing the wheelchair user's comfort, and allows interactions with surroundings through the footrest.

## Brief status update

- Extension Ideas/Sketches
- Inclusion Considerations

## Difficulties / advice requests

- Reach out to professors with experience in electronics
- Motor Extension Unit

## Current design:

No current design is yet created for this semester. Last semester's BME 200/300 Design is the only current design available.

## Materials and expenses

Item	Description	Manufacturer	Mft Pt#	Vendor	Vendor Cat#	Date	#	Cost Each	Total	Link
<b>Category 1</b>										
									\$0.00	
									\$0.00	
<b>Category 2</b>										
									\$0.00	
									\$0.00	
								<b>TOTAL:</b>	<b>\$0.00</b>	

## Major team goals for the next week

1. Individual Brainstorming on Designs
2. Preliminary Presentation done by Wednesday before class

## Next week's individual goals

- Jayson
  -
- Sam
  - Motor Extension Unit 3D modeling
- Bobby
  - Footrest support modeling
  - Further demographic research
- Charles
  -

## Timeline

Task	Jan	Feb				March					April				May	
	26	2	9	16	23	1	8	15	22	29	5	12	19	26	3	10
<b>Project R&amp;D</b>	X	X	X	X	X											
Empathize	X	X	X	X	X											
Background...	X	X	X	X	X											
Prototyping																
Testings																
<b>Deliverables</b>																
Progress Reports	X	X	X	X	X											
PDS			X	X	X											
Prelim presentation																

Final Poster																		
<b>Meetings</b>																		
Client			X															
Advisor	X	X	X	X	X													
<b>Website</b>	X	X	X	X	X													
Update	X	X	X	X	X													

Filled boxes = projected timeline  
 X = task was worked on or completed

## Previous week's goals and accomplishments

- Sam previous goal 1
  - Design sketches
  - Extension sketches
- Bobby previous goal 1
  - Footrest extension modeling illustration
  - Footrest folding mechanism design
- Charles previous goal 1
  -
- Jayson previous goal 1
  -
- Team previous goal 1
  -

## Activities

Name	Date	Activity	Time (h)	Week Total (h)	Sem. Total (h)
Sam	2/20/2024	Design/extension Sketches/brainstorming	5	5	10
Bobby	2/2/2024	Modeling, Force analysis	5	5	10
Jayson	2/02/2024	Design Matrix, Research	3	3	11
Charles	2/02/2024	Research	2	2	7