

# Title: Low-Interference Wheelchair Footrest

Date: 2/16/2024

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

- More research was conducted
- Met with client for more specifications
- Design sketches

## Difficulties / advice requests

- Reach out to professors with experience in electronics

## 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. Go over designs matrix to determine best design to begin further research and modeling into

## Next week's individual goals

- Jayson
  - Come up with a final design to move forward with
  - Reach out to professors and or students in electronics
  - Materials selection
- Sam
  - Modify the sketch if needed.
  - Start 3D modeling.
- Bobby
  - Determine which design best match the client's need
  - Help with 3D modeling
  - Attend meeting
  - Start working on materials
- Charles
  - Continue Design Matrix process to determine best design
  - Start to model designs

## 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												
Empathize	X	X	X	X												
Background...	X	X	X	X												
Prototyping																
Testings																

<b>Deliverables</b>																
Progress Reports	X	X	X	X												
PDS			X	X												
Prelim presentation																
Final Poster																
<b>Meetings</b>																
Client			X													
Advisor	X	X	X	X												
<b>Website</b>	X	X	X	X												
Update	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
  - Medical Research
- Bobby previous goal 1
  - Research on Demographic
  - Design Matrix
- Charles previous goal 1
  - Research demographics for our design
  - Design possible ideas
- Jayson previous goal 1
  - Created two designs for the matrix
  - Research on circuits and microcontrollers for wheelchair interface
- Team previous goal 1
  - Finished Design Matrix

## Activities

Name	Date	Activity	Time (h)	Week Total (h)	Sem. Total (h)
Sam	2/9/2024	Design Sketches	2	2	5
Bobby	2/2/2024	Design Matrix	2	2	5
Jayson	2/02/2024	Design Matrix, Research	3	3	11
Charles	2/02/2024	Research	2	2	5