Dynamic Balance Device

Date: 01/30/2026 - 02/5/2026

Client: Mr. Daniel Kutschera
Advisor: Professor Monica Ohnsorg

Team:

Kat Sattel - Team Leader (sattel@wisc.edu)

Therese Kalt- Communicator (tkalt@wisc.edu)

Noor Awad - BSAC (nawad2@wisc.edu)

Freyja Heggeland - BWIG/BPAG (heggeland@wisc.edu)

Problem statement: Patients that have suffered strokes have a 25-30% rate of developing spatial neglect syndrome. Symptoms of spatial neglect syndrome include loss of awareness of the body in space. Our client, Dr. Kutschera, a physical therapist, helps patients to regain strength and balance following a stroke. The client seeks to develop a device that can be used to improve visual scanning and balance training that is an update from the previous yard-stick design. The device should be mutli-functional so as to help patients with varying degrees of need and be effective in the rehabilitation treatment.

Brief status update: The team met with the client to ask questions about likes/dislikes for the previous prototype. The team also completed the Product Design Specifications (PDS)

Difficulties / advice requests: None to report

Current design: None

Materials and expenses

None to report, see table below:

Item	Description	Manufac-turer	Mft Pt#	Vendo r	Vendo r Cat#	Date	#	Cost Each	Total	Link
Category 1										
									$0.00	
									$0.00	
Category 2										
									$0.00	
									$0.00	
								TOTAL:	**$0.00**	

Major team goals for the next week

1. Receive previous semesters prototype and gather dimensions/weight
2. Begin drafting initial prototype ideas
3. Research to create design matrices

Next week's individual goals

- Kat Sattel
  - Brainstorm initial design ideas
  - Create design matrix criteria
  - Continue research
- Therese Kalt
  - Brainstorm preliminary design ideas
  - Continue research
  - Begin working on design matrix
- Noor Awad
  - Create ideas for design matrix
  - Continue to research possible materials needed
  - Research electronic component
- Freyja Heggeland
  - Continue research
  - Create design matrix criteria and weight with team
  - Brainstorm design ideas and communicate with team

Timeline

Task	Week				Week					Week				Week	
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
Project R&D															
Empathize	X														
Background…	X	X													
Prototyping															
Testings															
Deliverables															
Progress Reports	X	X													
Prelim presentation															
Final Poster															
Meetings															
Client		X													
Advisor	X	X													
Website															
Update	X	X													

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

Previous week's goals and accomplishments

- Kat Sattel
  - Completed sections of PDS
  - Continued research on materials and standards
  - Compiled questions to ask client + recorded answers during client meeting
- Therese Kalt
  - Completed sections of the PDS
  - Researched about the functional reach test and lightweight materials
  - Compiled questions for the client meeting
- Noor Awad
  - Completed my section of the PDS
  - Researched background further
  - Compiled questions for Client meeting + attended and took notes for meeting
- Freyja Heggeland
  - Completed sections of PDS
  - Worked on CAD modeling
  - Recorded answers during client meeting

Activities

Name	Date	Activity	Time (h)	Week Total (h)	Sem. Total (h)
Kat Sattel	2/1/2026 2/2/2026 2/3/2025	- Completed PDS - Client Meeting - Research	1.5 0.5 1	3	5
Therese Kalt	2/1/2026 2/2/2026 2/4/2026	- Completed sections of the PDS - Complied and asked questions for client meeting - Research	1 1 1	3	6
Noor Awad	2/1/26 2/4/26 2/5/26	- Questions for Client meeting - Completed PDS - Research	1 1 1	3	5
Freyja Heggeland	2/1/2026 2/2/2026 2/4/2026	- Drafted sections of the PDS - CAD Drafting and more PDS edits - PDS edits, patent research	1 2 2	5	9