

Weight Bearing Sensor

Client: Daniel Kutschera

Advisor: Prof. David Dean

Team Members:

Nikolai Hess (nphess@wisc.edu) - Leader

Jetzu Thao (jthao27@wisc.edu) - BSAC

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Cassity Dechenne (dechenne@wisc.edu) - Communicator

Date: September 5th, 2025 - September 11th, 2025

Problem statement

Patients with, or in recovery from, many conditions have restrictions on how much weight they can safely put onto their legs without causing themselves further injury. While there are some ways to attempt to ensure this requirement is met, they are difficult to implement, do not work as well, or provide as much feedback as would be helpful to patients and those assisting them. The goal of this project is to design a low-profile, easy-to-use device to measure and record the amount of weight put onto the legs of a patient, and give feedback to the patient and care providers to ensure their safety precautions are being met.

Brief status update

- Started thinking about design ideas
- Compiled questions to ask the client
- Contacted client
- Expanded on research

Difficulties/advice requests

None at this time

Current design

No design at this time

Materials and expenses

No materials or expenses at this time

Item	Description	Manufacturer	Mft Pt#	Vendor	Vendor 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. Continue research
2. Brainstorm questions for client meeting and meet with client
3. Complete PDS
4. Research previous team's design and find ways to improve on it

Next week's individual goals

- Nikolai Hess: Continue researching, brainstorm designs, meet with our team to discuss concrete next steps.
- Jetzu Thao: Research existing designs, competing designs, mechanics of designs. Meet w team to further plans
- Norah Greer: Share research with the team, brainstorm collaboratively.
- Keira Ferrigan: Continue researching, continuing to get to know the team.
- Cassidy Dechenne: Finalize meet up day/time with client, continue researching and communicating with advisor.

Timeline

<https://docs.google.com/spreadsheets/d/1GoAuANy3F-ltP7vhl7g-B9dxuefij8c50qzYs246SIE/edit?usp=sharing>

Activities

Name	Date	Activity/Previous Week's Accomplishments	Time (h)	Week Total (h)	Sem. Total (h)
Nikolai Hess	9/11/25	Research and brainstorming	1	1	1
Jetzu Thao	9/11/25	Research / Brainstorm	1	1	1

Norah Greer	9/11/25	Researched past attempts at device	1	1	1
Keira Ferrigan	9/10/25	brainstorm/research	1	1	1
Cassity Dechenne	9/11/25	Research / communication	1	1	1