- **Title**: Smart Walker, BME 400

- **Date**: 11/15/24 - 11/21/24

Last Name	First Name	Role	Email
Nimunkar	Amit	Advisor	ajnimunkar@wisc.edu
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Waldenberger	James	BWIG	jwaldenberge@wisc.edu

- **Problem statement**: In the rehabilitation process of acute strokes or similar conditions, it is necessary for the patient to be able to walk independently so they can safely return home. Our team must design a device that works in conjunction with a standard walker that will measure the speed and distance the patient walks and the pressure applied to the walker.

- **Brief status update**: The team has been working on testing and is beginning to integrate all components of the device together in time for the poster presentation.

- **Difficulties / advice requests**: The accelerometer has been having “drifting” issues which leads to inaccurate results.

- **Major team goals for the next week**: To begin to integrate all of the components together.

- **Next week's individual goals**: A concise statement of intended action to continue progress on the project - be specific, i.e. what will you research.

  Eva: Finish printing the load cell holders and create the display box model.

  Jacob: Find solution to load cell "drifting" and work on both displays working at same time.

  Nolan: Look to make cuts on the walker to get load cell holders implemented. Help with any final testing as well for accelerometer

  James: Test the load sensor circuit against actual weight values from a different scale to find error.

Project Goal	Deadline	Assigned	Progress	Completed
Initial meeting with client	9/12	Team	100%	Y
Gather research/project information	9/19	Team	100%	Y
Product Design Specification (PDS)	9/20	Team	100%	Y
Design Matrix	9/27	Team	100%	Y
Preliminary Presentation PDF	10/4	Team	100%	Y
Preliminary Report	10/9	Team	100%	Y
Order/Gather Materials	10/11	Team	100%	Y
Create prototypes, test	11/8	Team	80%	N
Final fabrication	11/25	Team	15%	N
Test and finalize final design	11/27	Team	25%	N
Poster Presentation PDF	12/6	Team	0%	N
Final Report	12/11	Team	0%	N
Final Notebook Team	12/11	Team	0%	N

- **Previous week's goals and accomplishments**:

Team: Completed more steps towards final fabrication

Eva: Created a testing setup for the load cells and ran static simulations on the load cell holders. Began fabrication with the walker.

Jacob: Worked on the “paperwork” for various tests and developed code that implemented the load cells.

Nolan: Worked on accelerometer testing, fabrication plans, and met with Mr. Kutschera

James: Tested the load sensors using Eva’s setup, and got calibration curves for the load sensor circuit.

Activities: a concise accounting of time spent working on the project.

	Eva	Jacob	Nolan	James
Week 1	3 hrs	2 hrs	2 hrs	2 hrs
Week 2	3 hrs	4 hrs	4 hrs	3.5 hrs
Week 3	2.5 hrs	3 hrs	3 hrs	3 hrs
Week 4	2.5 hrs	3 hrs	2.5 hrs	3 hrs
Week 5	3 hrs	3 hrs	2 hrs	2 hrs
Week 6	3 hrs	7 hrs	3 hrs	5 hrs
Week 7	3 hrs	4 hrs	3.5 hrs	4 hrs
Week 8	3 hrs	4 hrs	3 hrs	1 hr
Week 9	3 hrs	3 hrs	2 hrs	4 hrs
Week 10	5 hrs	5 hrs	3.5 hrs	6 hrs
Week 11	4 hrs	8 hrs	5.5hrs	5 hrs