

- **Title:** Smart Walker, BME 402
- **Date:** 1/23/25 - 1/30/25

Last Name	First Name	Role	Email
Nimunkar	Amit	Advisor	ajnimunkar@wisc.edu
Kutschera	Dan	Client	kutschera@att.net
BlomWillis	Nolan	Communicator	blomwillis@wisc.edu
Schiltz	Eva	BSAC	emschiltz@wisc.edu
Parsons	Jacob	BPAG	jcparsons@wisc.edu
Waldenberger	James	BWIG	jwaldenberge@wisc.edu
Kolnik	Owen	Leader	okolnik@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:** Starting back up with work on the project. We have split into multiple groups to cover electronics and CAD components separately.
- **Difficulties / advice requests:** No difficulties or advice requests for this coming week.

- **Major team goals for the next week:** Order anything needed to complete the power and accelerometer circuitry, continue working with CAD software to design housings for each component.
- **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 3D printing the load cell holder and begin planning for assembly with the walker.

Jacob: Order components and either complete PCB on Altium or work on new velocity measuring device.

Nolan: Work on integrating load cells into the walker

James: Go ahead and order the components needed for the power supply and accelerometer, start working with them when they arrive.

Owen: Get more definitive dimensions for the electrical housing. Get feedback from initial housing design and make corrections/adjustments. Work on sourcing components of the electrical housing and for attaching the load cell holders.

Project Goal	Deadline	Assigned	Progress	Completed
Select Journal	2/7	Team	0%	N
Preliminary Presentation	2/7	Team	0%	N
Preliminary Deliverables	2/26	Team	0%	N
Invention Disclosure Report (optional)	3/7	Team	0%	N
Executive Summary	4/18	Team	0%	N
Outreach Materials	4/18	Team	0%	N
Final Presentations	4/25	Team	0%	N
Final Deliverables	4/30	Team	0%	N

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

Team: Hit the ground running with testing work on both the accelerometer and leg prototype, get prepared to order a round of materials as well.

Eva: Performed testing with the load cell holders to determine adjustments for the final printed prototype.

Jacob: Worked on troubleshooting drift and deceleration issues with ADXL345 accelerometer.

Nolan: Worked on load cell testing to find errors in current load cell holders

James: Figure out what is needed to provide portable, rechargeable power to the entire device.

Owen: Worked on Designing Electrical Housing (as far as I can without knowing the dimensions of the battery and overall circuitry). Created version 1 of the model in solidworks for discussion with the team.

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

	Eva	Jacob	Nolan	James	Owen
Week 1	3 hrs	4 hrs	2.5 hrs	2hrs	3hrs