

- **Title:** Smart Walker, BME 402
- **Date:** 1/31/25 - 2/6/25

Last Name	First Name	Role	Email
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- **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: Help with construction and testing for load cell attachment.

Jacob: Conduct testing of the hall effect and IR sensors to get an idea on their accuracy and precision.

Nolan: Work on load cell attachment for walker as well as tweaking walker to fit holders.

James: Work with the IR sensor and power supply circuitry.

Owen: Order electrical housing components, and upon arrival print electrical housing components. Help with micropython coding for speed sensors. Help to drill into walker frame for load cell attachment.

Project Goal	Deadline	Assigned	Progress	Completed
Select Journal	2/7	Team	0%	N
Preliminary Presentation	2/7	Team	100%	Y
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	20%	N
Final Presentations	4/25	Team	0%	N
Final Deliverables	4/30	Team	0%	N

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

Team: Printed load cell holders. Ordered battery, buck converter, and new speed sensors. Worked on the preliminary presentation. Drilled into walker tubing to pass wiring through the frame.

Eva: Adjusted and 3D printed load cell housing.

Jacob: Ordered alternate sensors and power supply needs as well as got basic code for the hall effect and IR sensor.

Nolan: Worked on fabrication of of walker with holes for wiring as well as for holding the load cell holders in place.

James: Helped do some of the coding and implementation of the IR sensor, started working with power circuitry when it arrived.

Owen: Reworked the electrical housing design. Sourced all necessary components (pipe clamps nuts, bolts, etc.). Helped drill holes in the walker frame for wiring. Met with the team to discuss preliminary presentations and worked on individual presentation slides.

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	2 hrs	3 hrs
Week 2	2 hrs	3 hrs	5 hrs	2.5 hrs	6.5 hrs