

Stair Chair: BME 200/300

Dates: 10/11/2024-10/17/2024

Client: Mr. Daniel Kutschera, PT

Advisor: Dr. James Trevathan

Team:

Matt Sheridan (Leader)

Dan Altschuler (Communicator)

Cody Kryzer (BSAC)

Luke Rosner (BWIG)

Abi Conners (BPAG)

Problem Statement

Create a mechanical device that temporarily handicapped patients can use to ascend and descend 3-5 stairs. The device should be inexpensive to fabricate, as compared to competing powered stair lifts, and be easy to set up and take down, both inside and outside the patient's home.

Brief Status Update

The team completed some more research this week on possible testing methods and also materials that can be used in the project. The team is hoping to do some prototyping during the next two weeks to create a basic proof of concept before Show and Tell.

Weekly Goals and Accomplishments

- Team
 - Worked on getting a tangible product for show and tell
- Matt Sheridan
 - Began brainstorming prototyping methods and materials
- Dan Altschuler
 - Conducted research onto codes and standards
 - Did basic material background
- Cody Kryzer
 - Did research on the mechanics of the design
- Luke Rosner
 - Did force analysis of prototype design
- Abi Conners
 - Researched materials for the prototype

Upcoming Goals

- Team
 - Work on prototype
- Matt Sheridan
 - Organized team efforts on final design
 - Begin the prototyping process
- Dan Altschuler

- Continue work on the final design
- Cody Kryzer
 - Determine where to source materials for final design
- Luke Rosner
 - Create fabrication plan for prototype
- Abi Conners
 - Continue work for proof of concept

Project Timeline

Deliverable	Deadline	People Assigned	Progress
Initial Client Meeting	9/13	ALL	100%
Product Design Specifications (PDS)	9/20	ALL	100%
Individual Research	9/20	ALL	100%
Design Matrix Criteria	9/27	ALL	100%
Design Ideas	9/27	ALL	100%
Preliminary Presentation	10/4	ALL	100%
Individual Research	10/4	ALL	100%
Preliminary Deliverables	10/9	ALL	100%
Decide upon Final Design	10/9	ALL	100%
Finished Model of Final Design	10/25	ALL	0%
Show and Tell	11/1	ALL	0%
Final Prototype Prepared (by Thanksgiving break)	11/26	ALL	0%
Final Presentation	12/6	ALL	0%
Final Deliverables	12/11	ALL	0%

Materials and Expenses

Item	Description	Manufacturer	Mft Pt#	Vendor	Vendor Cat#	Date	QTY	Cost Each	Total	Link
Category 1										
									\$0.00	
									\$0.00	

Category 2									
									\$0.00
									\$0.00
								TOTAL:	\$0.00