

Knee Crutch

Progress Report #1

BME Design 200/300

Date: 9/4-9/10

Client: Daniel Kutschera

Advisor: Duc-Huy Nguyen

Team:

Carmen Tanem	ctanem@wisc.edu
Team Leader	
Katie Matheus	kmatheus@wisc.edu
Team Leader	
Meghan Hayes	hayes27@wisc.edu
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BSAC	
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BWIG	
Zach Haussler	haussler@wisc.edu
BPAG	

Problem statement

Patients who are non-weightbearing on a lower limb often have difficulty safely navigating stairs when returning home, particularly when weakness or other physical limitations prevent them from using crutches. Current solutions are either improvised, uncomfortable, difficult to adjust, or designed for walking rather than stair navigation. Therefore, there is a need for a stable, adjustable, comfortable, and easily sanitized device that allows non-weightbearing patients to safely ascend and descend stairs without placing weight on the injured lower limb.

Brief status update

This week we successfully picked our projects and got our other team members. We are starting to work through research and familiarizing ourselves with the project and hypothesizing ideas for our project. We are excited to set up a client meeting and meet with our advisor for guidance for the semester.

Difficulties / advice requests

This week when we meet with our client/advisor we will seek insight on direction on our project.

Current design

We are currently using previous years' projects and progress to have a start for our project.

Materials and expenses

Item	Description	Manufac-turer	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	

Goals

Major team goals for the next week

1. Start researching and coming up with a big list of ideas that we can start ping ponging
2. Get LabArchives all set so we are ready for the semester

Next week's individual goals

- Carmen Tanem
 - Research and gather information from the previous year to get a better understanding of how we can start
 - Kickoff the first BSAC meeting

- Connect with the team!
- Katie Matheus
 - Research competing designs including the past years' projects and what were the issues to improve.
 - Meet with our client and advisor.
 - Have a team meeting, figure out what works best with everyone's schedules.
- Meghan Hayes
 - Research potential designs, along with previous versions of the projects.
 - Meet with client and advisor
 - Establish stronger relationships with both the client and our advisor
- Madeline
 - Research designs of products of similar usage to find ways to adapt them to our clients needs.
 - Meet with client, advisor, and the rest of the team to finish introductions and begin work on designs.
 - Attend the first BSAC meeting.
- Zach Haussler
 - Research existing designs, including those from the previous two years of this project.
 - Meet with client, advisor, and the rest of the team to develop a better understanding of the problem and group logistics.
- Victoria Kind
 - Research similar products and identify constraints that need to be improved based on clients needs.
 - Meet with advisor and client, and the team to gather ideas and begin working on designs

Timeline

Task	N/A	Sept				Oct					Nov				Dec	
	N/A	3	10	17	24	1	8	15	22	29	5	12	19	26	10	17
Project R&D																
Empathize																
Background...																
Prototyping																
Testings																
Deliverables																
Progress Reports																
Prelim presentation																
Final Poster																
Meetings																
Client		X														
Advisor		X														
Website		X														
Update																

Filled boxes = projected timeline

X = task was worked on or completed

Detailed accomplishments

Previous week's goals and accomplishments

- Carmen Tanem
 - Picked a project
 - Collaborated with new group members on tasks, roles, expectations, and similarities!
- Katie Matheus
 - Picked a project and met with team
 - Assigned team roles
- Meghan Hayes
 - Picked a project and met with team
 - Assigned team roles
 - Emailed client and advisor
- Madeline
 - Picked a project and met with team members
 - Assigned team roles
 - Collect information on BSAC responsibilities
- Zach Haussler
 - Picked a project and met with team members
 - Delegated team roles among team members
 - Set up communication with team members
- Victoria
 - Successfully picked a project and met with team members
 - Upload group photo to project website

Summary of Team Accomplishments

1. The team reached out to the client.
2. Created a shared google drive

Activities

Name	Date	Activity	Time (h)	Week Total (h)	Sem. Total (h)
Carmen Tanem					
Katie Matheus					
Meghan					
Victoria					
Madeline					
Zach					

