

PRINT-A-PUNCH

Date: September 13, 2024 to September 20, 2024

Client: Prof. Colleen Witzenburg (witzenburg@wisc.edu) and Mr. Daniel Pearce (dppearce@wisc.edu)

Advisor: Dr. Megan Settell - settell@wisc.edu

Daniel Pies - dpies@wisc.edu - Team Leader

Colin Bailey - cgbailey@wisc.edu - Communicator

Kendra Ohde - ohde@wisc.edu - BPAG

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Cole Miller - ctmiller8@wisc.edu - BSAC

Problem Statement

In order to carry out effective biaxial testing of tissue, a precise, symmetric sample must be cut. A cruciform shaped sample allows this testing to be performed however there are not currently any products that can uniformly cut this type of sample. The goal of this project is to generate a method to use factory produced razor blades to cut small samples of tissue so biaxial tensile testing is effective while keeping the product simple and inexpensive.

Brief Status Update

This week was the team’s second week assigned on this project. The team met with the advisor to discuss the first progress report, and had a team meeting after the advisor meeting. The team began researching and created the PDS. In the coming week the team will continue researching and start brainstorming potential designs for the project.

Difficulties / Advice Requests

- All team members were on a time crunch due to external conflicts, making it difficult to find a time to meet and discuss the splits for the sections of the PDS.

Current Design

No prototyping or designing has been done at this phase of the 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

Major Team Goals For The Next Week

- Continue basic background research
- Begin working on sketches
- Work on preliminary presentation

Next Week’s Individual Goals

- Daniel Pies
 - Continue research on relevant topics
 - Materials
 - Tissue thickness for artery samples
 - Current practices
 - Organize files and create necessary documents
 - Brainstorm potential designs for initial prototype
- Colin Bailey
 - Brainstorm potential ideas
 - Inquire about possible observation during stress testing
 - Plan next client meeting
- Cole Miller
 - Continue research of past designs, tissues, and desired outcome for product
 - Attend BSAC executive meeting
 - Acquire workshop licenses to work in the makerspace when designing product
- Emmett Jones
 - Continue updating website with Progress Report, PDS, and other relevant information
 - Begin rough sketching of preliminary design ideas
 - Continue research to assist with preliminary designs
 - Tissue Mechanics
 - Cruciform shaped tissue samples usage
- Kendra Ohde
 - Continue research
 - Materials
 - Ways to prevent asymmetry by reducing the strain on the tissue
 - Current products used as well as new technologies being developed
 - Look at the finances for the project and create a rough list of things that are necessary for the project
 - Brainstorm potential design ideas

Timeline

Task	September				October				November					December	
	6	13	20	27	4	11	18	25	1	8	15	22	29	6	13
Project R&D															
Empathize															
Background...															
Prototyping															
Testings															
Deliverables															
Progress Reports		X	X												
Prelim Presentation															
Final Poster															
Meetings															
Client		X													
Advisor	X	X	X												
Website															
Update	X	X	X												

Filled boxes = projected timeline

X = task was worked on or completed

Previous Week's Goals and Accomplishments

- Daniel Pies -
 - Organize shared drive
 - Create and work on progress report
 - Begin preliminary research to create and fill out PDS
- Colin Bailey -
 - Worked on PDS
 - Continued research
 - Created preliminary sketch ideas
- Cole Miller -
 - Attended BSAC meeting to obtain advice from peers
 - Attended meeting with clients
 - Clarified project goals/restrictions with client
- Emmett Jones -
 - Update website with Progress Report and other relevant information
 - Begin research
 - 3D printed materials
 - Previous similar/competing designs
 - Brainstorm preliminary designs/ideas
 - Work on PDS

- Kendra Ohde -
 - Began Preliminary Research
 - Created the BPAG spreadsheet and put it in the drive
- Team's Goal -
 - Attend preliminary meeting client
 - Brainstorm questions for meeting
 - Begin progress report

Activities

Name	Date	Activity	Time (h)	Week Total (h)	Sem. Total (h)
Team	9/6-9/13	- Advisor Meeting	-1	1	3
Daniel Pies	9/14-9/20	- Created and worked on PDS - Research for PDS - Attend advisor meeting - Created progress report	-1 -2 -.5 -.5	4	6.5
Colin Bailey	9/14-9/20	- Continued research - Worked on PDS - Attended advisor meeting	3.5	3.5	5.5
Emmett Jones	9/14-9/20	- Uploaded PDS and Progress Report on website - Attend advisor meeting - Continued research into materials - Worked on PDS section	3	3	5
Cole Miller	9/14-9/20	-Continued research -Attend advisor meeting -Attended BSAC Executive Meeting	-2 -.5 -.5	3.	5
Kendra Ohde	9/14-9/20	-Researched information about our project: Type of materials of materials used and how to incorporate this into out drawings -Created design sketches -Looked into material costs	3	3	5
			Total	17.5	30