

# EYE DROPPER ASSISTANT, BME 402

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Note: Team member Tommy is currently participating in a Co-Op and is devoting time to that position. Tommy will work on what he can this semester for the project but due to this conflicting commitment, his contributions *may* be limited.

## Problem Statement

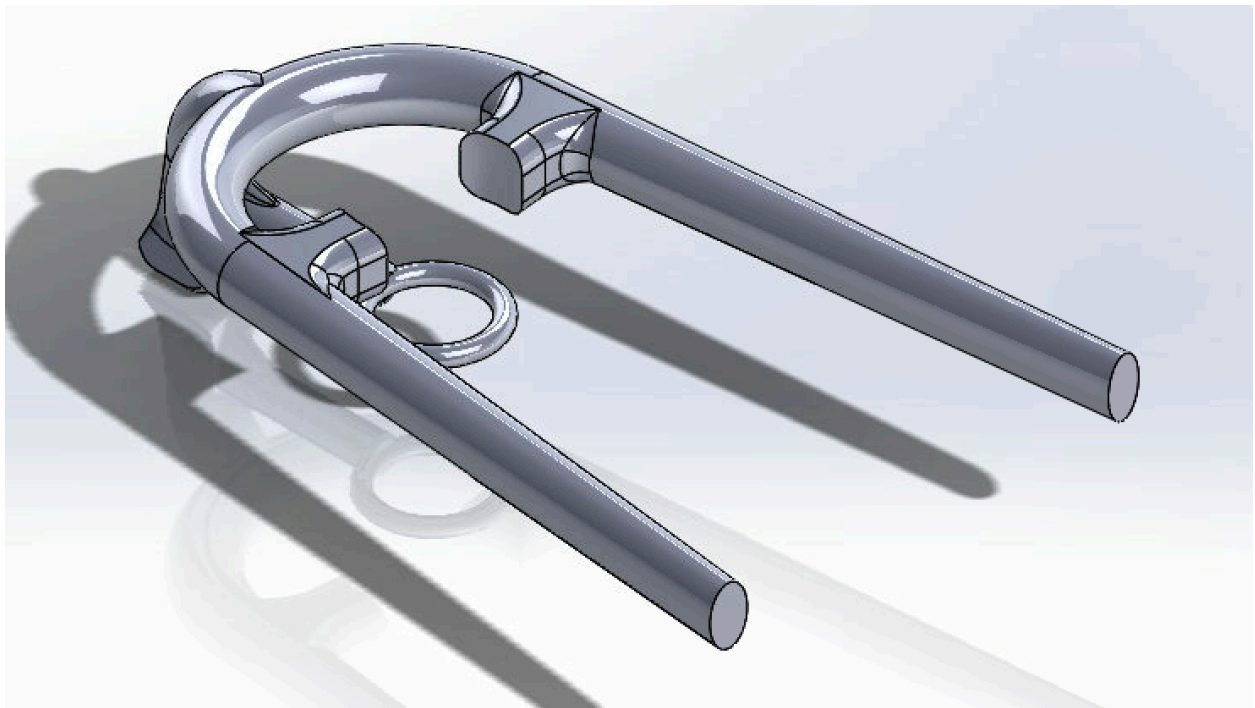
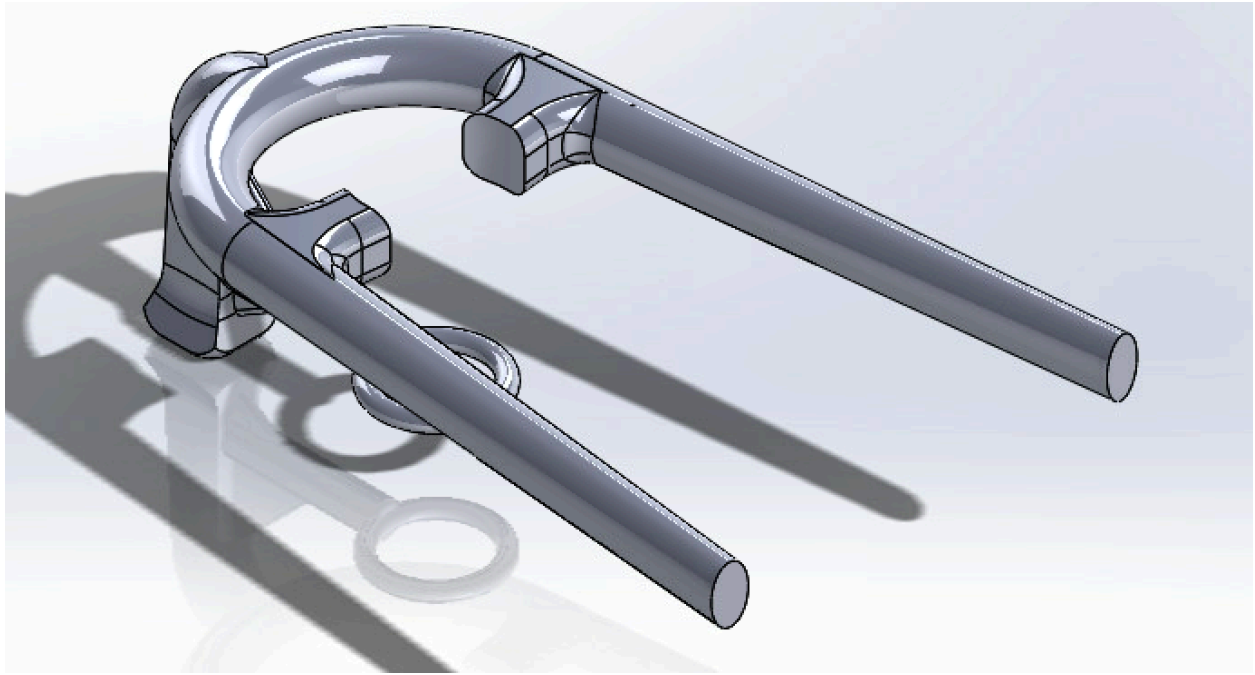
Administration of eye drops is difficult for patients, especially older adults and those with limiting diseases like arthritis. This results in eye drop waste and tip contamination. The team will design a device to assist patients in squeezing the eye drop bottle while releasing a consistent amount of solution per drop. This device will improve the administration of eye drops for the patient while minimizing eye drop waste.

## Brief Status Update:

The team spent the week finalizing the poster and practicing for the poster presentations this Friday. Additionally, the team has finished all the aspects for the packaging.

**Difficulties & Advice Requests: N/A**

### Current Design:



### Design Changes:

- Nose piece removed and platform implemented for user to rest on eyebrow bone.
- Altered the squeezing mechanism to be more uniform for injection molding.
- Separated components to allow for less complex injection molding procedures.

## Materials and Expenses:

Item	Description	Manufacturer	Part Number	Date	QTY	Cost Each	Total	Link
<b>Existing Devices</b>								
<b>Droppy Eye Drop Dispenser</b>	Competing Design	Droppy, Amazon	DR001	9/25	1	9.99	9.99	<a href="#">Link</a>
<b>GentleDrop Eye Drop Guide</b>	Competing Design	GentleDrop, Amazon	ASIN: B0BQBHRKV1	9/25	1	17.99	17.99	<a href="#">Link</a>
<b>Prototyping</b>								
<b>Silicone Eyelash Curler</b>	Prototype Materials (Handle Grips)	PETUNIA SKINCARE, Amazon	ASIN: B00UVLNDVQ	10/25	1	7.49	7.49	<a href="#">Link</a>
<b>MakerSpace Print</b>	Prototype v1	UW Makerspace Ultimaker 3D Print	N/A	10/31	1	4.96	4.96	N/A
<b>MakerSpace Print</b>	Prototype v2	UW Makerspace Ultimaker 3D Print	N/A	11/10	1	5.07	5.07	N/A
<b>MakerSpace Print</b>	Prototype v3	UW Makerspace Bambu Labs 3D Print	N/A	11/13	1	4.5	4.5	N/A
<b>MakerSpace Print</b>	Prototype v3	UW Makerspace Bambu Labs 3D Print	N/A	11/14	1	4.96	4.96	N/A
<b>MakerSpace Print</b>	Prototype v3	UW Makerspace Ultimaker 3D Print	N/A	11/15	1	8.16	8.16	N/A

Item	Description	Manufacturer	Part Number	Date	QTY	Cost Each	Total	Link
<b>MakerSpace Print</b>	Prototype v4	UW Makerspace Ultimaker 3D Print	N/A	11/17	1	10.08	10.08	N/A
<b>MakerSpace Print</b>	Test Fixture	UW Makerspace Ultimaker 3D Print	N/A	11/29	1	13.78	13.76	N/A
<b>MakerSpace Print</b>	Final Prototype	UW Makerspace Ultimaker 3D Print	N/A	12/1	1	7.36	7.36	N/A
<b>MakerSpace Print</b>	Multiple Final Prototypes	UW Makerspace Ultimaker 3D Print	N/A	12/8	1	11.6	11.6	N/A
<b>MakerSpace Print</b>	Multiple Final Prototypes	UW Makerspace Ultimaker 3D Print	N/A	2/6	1	7.84	7.84	N/A
<b>MakerSpace Print</b>	Prototype Adjusted For IM	UW Makerspace Ultimaker 3D Print	N/A	2/23	1	2.15	2.15	N/A
<b>MakerSpace Print</b>	Parts for Connection Mechanism	UW Makerspace Ultimaker 3D Print	N/A	2/26	1	2.8	2.8	N/A
<b>MakerSpace Print</b>	Prototypes for Testing	UW Makerspace Ultimaker 3D Print	N/A	3/4	1	8.2	8.2	N/A
<b>MakerSpace Print</b>	Prototypes for Testing	UW Makerspace Ultimaker 3D Print	N/A	3/4	1	8.75	8.75	N/A



Prototyping	✓	✓	✓	✓													
Testing					✓	✓	✓	✓	✓		✓	✓					
<b>Deliverables</b>																	
Progress Reports	✓	✓	✓	✓	✓	✓	✓	✓	✓		✓	✓					
Prelim presentation			✓														
Final Poster																	
<b>Meetings</b>																	
Client		✓		✓		✓		✓			✓						
Advisor	✓	✓	✓	✓	✓	✓	✓	✓	✓		✓	✓					
<b>Website</b>																	
Update	✓	✓	✓	✓	✓	✓	✓	✓	✓		✓	✓					

Project Goal	Deadline	Assigned	Progress	Completed
Preference Human Testing	2/29	All	Completed	Yes
Preliminary Oral Presentation	2/9	All	Completed	Yes
Preliminary Deliverables	2/28	All	Completed	Yes
Show and Tell	3/22	All	Completed	Yes
Executive Summary	4/19	All	In Progress	
Final Poster Presentation	4/26	All	Not Started	
Final Deliverables	5/1	All	Not Started	

## Summary of Weekly Team Member Design Accomplishments

*Team:* The team completed the poster for the poster presentation and practice presenting as a team. The team also analyzed the preference testing results by performing a thematic analysis.

*Individual:*

- ❖ Jenna:
  - Printed packaging stickers from Tommy's Logo design
  - Assembled sample clamshell packaging for presentation
  - Finalized and printed final poster
- ❖ Eva:
  - Printed preference test survey for presentations

- Finished poster and practiced presenting with team
- ❖ Tevis:
  - Finished poster sections
  - Worked with Tommy to brainstorm universal design
  - Practiced poster presentation
- ❖ Tommy:
  - Completed the poster and began practicing with the team
  - Created MyDropper logo and branding details
    - Added entries about branding guidelines to LabArchives
    - Helped create a color scheme for the instructions for use
- ❖ Kasia:
  - Finished poster and practiced presentation with team
  - Completed executive summary based off of feedback from advisor
  - Added lab archive entries related to marketing and IP conversations
- ❖ Anabelle:
  - Finished poster and practiced presenting with the team
  - Completed design instructions for the packaging
  - Added preference testing visuals to the final poster