

## Glucose Alerting System

Client: Olive Cernigila & Callie Berg, Dr. Beth Martin

Advisor: Dr. John Puccinelli

Design Team:

Isabel Ploessl - Team Leader

Claudia Beckwith – BWIG & BPAG

Lauren Klein – BSAC & Communicator

Business: Kiera Klemm

Date: 4/9/26

### Problem Statement:

Parents and caregivers of children with T1D often struggle to quickly see and interpret glucose readings, leading to stress and delayed decisions. The Wearable Glucose Alerting System aims to solve this problem by providing a clear, visible signal that instantly shows when a child's blood sugar needs attention.

### Brief Status Update:

**Preparing for ShaRx competition!**

### Summary of Weekly Team Member Design Accomplishments:

Whole Team: Fixes and presentation preparation

Name	Activity	Time (hr)	Week Total (hr)
Isabel Ploessl	<ul style="list-style-type: none"><li>• Presentation preparation and meetings</li><li>• Reprinting Box</li><li>• Ethics Assignment</li><li>• Presentation</li></ul>	4 hrs 1 hr 1 hr 2.5 hr	9 hrs








	<ul style="list-style-type: none"> <li>• Format progress report</li> </ul>	½ hr	
Claudia Beckwith	<ul style="list-style-type: none"> <li>• Executive Summary</li> <li>• App Updates</li> <li>• Lab Archive updates with new code and invoices</li> </ul>	1 hr 1 hr ½ hr	2.5 hrs
Lauren Klein	<ul style="list-style-type: none"> <li>• Presentation Preparation</li> <li>• Circuit/Battery Fixes</li> <li>• Ethics Assignment</li> <li>• Executive Summary</li> </ul>	1 hr 2 hrs 1 hr 1 hr	5 hrs
Kiera Klemm	<ul style="list-style-type: none"> <li>• Sharkx Presentation</li> <li>• Presentation Prep</li> </ul>	2 hr 2 hr	4 hr

**Weekly/Ongoing Difficulties: none 😊**

Upcoming Team and Individual Goals:

- Team:
  - Begin Testing
  - Format Final deliverables
- Isabel Ploessl:
  - Begin Testing
- Claudia Beckwith:
  - Begin Testing
- Lauren Klein:
  - Begin Testing
- Kiera Klemm:
  - Help with Testing

### Project Timeline :

Project Goal	Deadline	Team Assigned	Progress	Completed
Client Meeting	1/29	ALL	100%	YES 
Weekly Progress Report	1/29	ALL	100%	YES 
PDS	2/5	ALL	100%	YES 
Design Matrix	2/13	ALL	100%	YES 
Preliminary Presentations	2/20	ALL	100%	YES 
Preliminary Deliverables	2/25	ALL	100%	YES 
Show and Tell	3/20	ALL	100%	YES 
Poster Presentations	4/24	ALL	25%	
Final Deliverables	4/29	ALL	10%	

### Expenses :

Category 1 - Appearance										
Item	Description	Manufacturer	Mft Pt#	Vendor	HS Code	Date	Qty	Cost Each	Total	Link
PLA Box Prototype	Box to fit new electronic components	UW Maderspace	N/A	UW Maker space	N/A	3/11/2026	1	0.27	0.27	N/A
Resin Box Prototype	Resized box for electrical housing	UW Makerspace	N/A	UW Maker shpace	N/A	3/17/2026	1	5.07	5.07	N/A

Watch Band	Apple watch compatible silicone band	PolyJoy	DBGJB Z001Q	Amazon	N/A	3/13/2026	2	4.99	9.99	<a href="#">Link</a>
PLA Box Prototype	Testing new dimensions	UW Makerspace	N/A	UW Makerspace	N/A	3/23/2026	1	0.27	0.27	N/A
Resin Box Prototype	Testing with new circuit components	UW Makerspace	N/A	UW Makerspace	N/A	3/24/2026	1	2.36	2.36	N/A
<b>Category 2 - Internal/Electronic Components</b>										
Item	Description	Manufacturer	Mft Pt#	Vendor	HS Code	Date	Qty	Cost Each	Total	Link
Seed StudioXIAO ESP32-C6 (3PCS)	Microcontroller for internal bracelet circuitry	Seed Studio	102010574	Seed Studio	8543709990	2/4/2026	1 (3 pack)	19.98	19.98	<a href="#">XIAO C6 microcontroller (3 pack)</a>
1 x NeoPixel Jewel - 7 x 5050 RGB LED with Integrated Drivers [ID:2226]	LED light for bracelet	Adafruit Industries	2226	Adafruit Industries	N/A	2/4/2026	1	20.39	20.39	<a href="#">NeoPixel Jewel - 7 x 5050 RGB LED with Integrated Drivers : Adafruit Industries, Unique &amp; fun DIY electronics and kits</a>
1 x Lithium Ion Polymer Battery -	Battery for bracelet	Adafruit Industries	1578	Adafruit Industries	N/A	2/4/2026	1	22.50	22.50	<a href="#">Lithium Ion Polymer Battery - 3.7v 500mAh : Adafruit Industries, Unique &amp; fun DIY electronics and kits</a>

3.7v 500mAh											
1 x Lithium Ion Polymer Battery - 3.7v 500mAh	Battery for bracelet	Adafruit Industries	1578	Adafruit Industries	N/A	3/24 /202 6	1	7.9 5	7. 95		<a href="#">Lithium Ion Polymer Battery - 3.7v 500mAh : Adafruit Industries. Unique &amp; fun DIY electronics and kits</a>
Adafruit Industries LLC LIPOLY BATTERY CHARGER W/USB C	Battery Forward Charger	Adafruit Industries	4410	Adafruit Industries	N/A	3/24 /202 6	1	5.9 5	5. 95		<a href="https://www.digikey.com/en/products/detail/adafruit-industries-llc/4410/10673110">https://www.digikey.com/en/products/detail/adafruit-industries-llc/4410/10673110</a>
Pin Cable Male Header	Battery connector or cable	Adafruit Industries	3814	Adafruit Industries	N/A	3/24 /202 6	2	0.7 5	1. 5		<a href="https://www.digikey.com/en/products/detail/adafruit-industries-llc/3814/9380221">https://www.digikey.com/en/products/detail/adafruit-industries-llc/3814/9380221</a>
								<b>TO</b>	<b>96</b>		
								<b>TAL</b>	<b>.2</b>		
								<b>:</b>	<b>3</b>		