

# **Incubator for Infant Wildlife (Wildlife Incubator Team) BME 402**

Client: Dr. Mark Stelford

Advisor: Dr. Walter Block

Team: Tanishka Sheth (Leader + Communicator) - tsheth@wisc.edu

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Date: 2/9-2/15

## **Problem statement**

Wildlife rehabilitation often includes caring for neonatal wildlife who are unable to control their own body temperature, thus the incubator must provide supplemental temperature control. Although private parties frequently contribute to wildlife rehabilitation efforts, they do not have enough financial resources to purchase an incubator. As such the wildlife incubator must be low-cost, durable, modular, easy to clean, and precise in temperature control. It is essential to create an incubator that is more accessible and accommodating for those interested and passionate about wildlife rehabilitation but may lack the financial resources to purchase components currently available in the market.

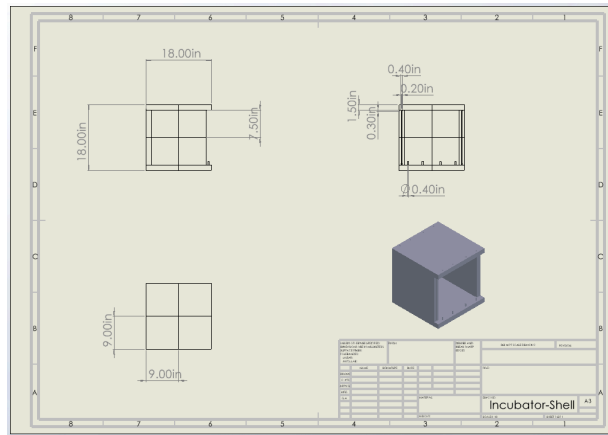
## **Brief status update**

The team has presented the plan for the rest of the semester in terms of fabrication and testing for prototype improvement. The team is now focusing on implementing new PID libraries into the code that we have to see how our outputs change. Furthermore, the team is also looking to print pieces of the 3D modeled exterior at the Makerspace at the university.

## **Difficulties / advice requests**

The team is trying to meet with the client to ensure that the direction we are going this semester matches client expectations. However, we are having scheduling conflicts.

## Current design



## Materials and expenses

Item	Description	Manufacturer	Mft Pt#	Vendor	Vendor Cat#	Date	#	Cost Each	Total	Link
<b>Category 1</b>										
									\$0.00	
									\$0.00	
<b>Category 2</b>										
									\$0.00	
									\$0.00	
								<b>TOTAL:</b>	<b>\$0.00</b>	

## Major team goals for the next week

1. Put the PID libraries in place and begin testing to see what libraries work the best for our needs
2. Complete printing of the exterior shell of the design

## Next week's individual goals

- Tanishka:
  - Begin testing the code with new libraries.
- Loukia:
  - Begin testing and working with the code of the different libraries/writing code.
  - Look into prototyping and supporting creation of LT spice model.
- Sophia:

- Refined exterior design/estimated costs (and adjusted design based on cost) with Erwin.
- Erwin:
  - Refined exterior design/estimated costs (and adjusted design based on cost) with Sophia.

## Timeline

Task	Jan	Feb				March					April				May	
	26	2	9	16	23	1	8	15	22	29	5	12	19	26	3	10
<b>Project R&amp;D</b>																
Designing	X	X	X													
Prototyping																
Testing																
Feedback																
<b>Deliverables</b>																
Progress Reports	X	X	X													
Prelim presentation			X													
Final Poster																
<b>Meetings</b>																
Client																
Advisor	X	X	X													
<b>Website</b>																
Update	X	X	X													

Filled boxes = projected timeline

X = task was worked on or completed

## Previous week's goals and accomplishments

- Team:
  - The team has started implementing the four different libraries that were found in different copies of the code from last semester
  - The printing process has been started
- Tanishka:
  - Gave presentation and gained advisor feedback on what improvements need to be made in the future
  - Added PID control components to existing code by importing new libraries
- Loukia:
  - Helped give presentation and adjusted for what improvements need to be made.
- Sophia:
  - Made/gave presentation, researched libraries.
- Erwin:
  - Initialized printing process.

## Activities

Name	Date	Activity	Time (h)	Week Total (h)	Sem. Total (h)
Tanishka Sheth	2/9-2/15	Present the preliminary presentation and began implementing the libraries discussed into the existing code	2	2	5.5
Loukia Agoudemos	02/9-2/15	Helped give presentation and adjusted for what improvements need to be made.	1	1	4
Erwin Cruz	2/9-2/15	Meeting with Dr. Block and deciding next steps and collecting old CAD prints	2	2	4.5
Sophia Finn	2/9-2/15	Met with advisor, research Arduino PID libraries, updated website	2	2	5.5