Incubator for Infant Wildlife (Wildlife Incubator Team) BME 402

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Advisor: Dr. Walter Block
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Date: 3/22-4/4

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 been working on writing an executive summary to apply for design awards at the end of the semester. This document will be attached to this report.

Difficulties / advice requests

Getting the PID controller to help decrease oscillations. The code and control theory are proving to be challenging.

Current design

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

1. Testing of the circuit and shell together

Next week's individual goals

- Tanishka:
  - Work on integrating the heating circuit with the shell that has been assembled
- Loukia:
  - Help with integrating the heating circuit and the assembled shell.
- Sophia:
  - Install doorway into shell system in a properly compatible manner
- Erwin:
  - Combine heating circuit with humidity control
  - Ensure sturdiness of shell and work on combining temperature and humidity control with the shell

Timeline

Task	Jan	Feb				March					April				May	
	26	2	9	16	23	1	8	15	22	29	5	12	19	26	3	10
Project R&D																
Designing	X	X	X	X	X	X	X	X	X							
Prototyping				X	X	X	X	X	X							
Testing																
Feedback																
Deliverables																
Progress Reports	X	X	X	X	X	X	X	X	X							

Prelim presentation			X													
Final Poster																
Meetings																
Client																
Advisor	X	X	X	X	X		X									
Website																
Update	X	X	X	X	X	X	X									

Filled boxes = projected timeline
X = task was worked on or completed

Previous week's goals and accomplishments

- Team:
  - The team was on spring break last week but in the week before, the team worked on the assembly of the shell and the temperature circuit
- Tanishka:
  - Assembling the circuit
- Loukia:
  - Helped with shell assembly and temperature circuit before break
- Sophia:
  - Shell assembly
  - Calculate specs for entryway of incubator / doorway with proper ventilation and heat leakage.
- Erwin:
  - Worked on shell assembly and temperature circuit before break

Activities

Name	Date	Activity	Time (h)	Week Total (h)	Sem. Total (h)
Tanishka Sheth	3/22-4/4	Identify the award to apply for and write the executive summary.	2	2	17.5
Loukia Agoudemos	3/22- 4/4	Built circuit and worked on executive summary	2	2	17
Erwin Cruz	3/22-4/4	Built circuit and worked on executive summary	2	3	12
Sophia Finn	3/22-4/4	Executive summary	3	3	13.5