***EE 491 WEEKLY REPORT 8 Date: 10/18/16-0/24/16***

***Group number: 24***

***Project title: Ultrasound Water Purification***

***Client &/Advisor: Prof Bigelow***

***Team Members/Role:***

***Jacob Bernhard/Team leader***

***Yuhao Fu/Team Communication Leader***

***Parker Oltrogge/Team Webmaster***

***Subin Mao/Team Key Concept Holder***

***Xiyuan Wang/Team member***

***Tao Wu/ Team member***

* **Weekly Summary**

For this week, we two groups are working on our own part of this project. As the member of purification system, we did lots of research on the BSL-1 Bio-continents and ready to report to our advisor this week. Since our advisor is not in the town this week, we couldn’t meet him and do the real experiment on water purification, we designed the floating system and purification device instead. For the testing system, we looked into the thermometer design and build the circuit for it. We will have meeting with advisor to ask about more detailed for sensors.

* **Past week accomplishments (please describe as what was done, by whom, when)**
* Jacob Bernhard: design on new method of ultrasonic blasting
* Yuhao Fu: did research on the BSL-1 Bio-continents and design the purification device
* Parker Oltrogge: worked with Subin and Xiyuan in designing and building diode thermometer.
* Subin Mao: thermometer design, build the circuit for it
* Xiyuan Wang: design circuit for thermometer.
* Tao Wu: understand previous research which is related to this project. tried to find some information about single cell lives in the water
* **Pending issues**
* Jacob Bernhard: design on new method of ultrasonic blasting
* Yuhao Fu: the specific value of frequency and amplitude to adjust the ultrasound
* Parker Oltrogge: Really need to get down and do the website. Which is my job, it just needs to get done.
* Subin Mao: Due to the error of the resistances and capacitors, the measured value may not be accurate.
* Xiyuan Wang: Due to the error of the resistances and capacitors, the measured value may not be accurate.
* Tao Wu：still, design of housing is a hard part. although we have some ideas, we need to figure out many details to make it real.
* **Individual contributions**

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| --- | --- | --- | --- |
| **NAME** | **Individual Contributions** | **Hours this week** | **HOURS**  **cumulative** |
| **Jacob Bernhard** | Found the method of culture for testing. | 4 | 24 |
| **Yuhao**  **Fu** | the specific value of frequency and amplitude to adjust the ultrasound | 3.5 | 24.5 |
| **Parker Oltrogge** | built the circuit for thermometer | 3.5 | 23 |
| **Subin Mao** | built the circuit for thermometer | 3.5 | 23.5 |
| **Xiyuan Wang** | design circuit for thermometer | 3 | 23 |
| **Tao**  **Wu** | get more information about things we need to eliminate in our testing water | 3 | 23 |

* **Comments and extended discussion**

It is good to split the team based upon what each member wanted most to do and was most knowledgeable in. we will keep working on our own thoughts and design, and share the ideas weekly. We decided to meet with advisor separately each week but have meeting together each week too.

* **Plan for coming week**
* Jacob Bernhard: Meet with adviser, also present the information we have gathered for further discussion. Start design on new method of ultrasonic blasting.
* Yuhao Fu: meet with advisor to work on the bio-continent cultured and design the purification device
* Parker Oltrogge: Test the thermometer and start the website.
* Subin Mao: build the arduino programme for the thermometer circuit, and try to design the ph meter for testing part.
* Xiyuan Wang: improve our thermometer circuit and design ph meter.
* Tao Wu: try to figure out the opening and closing of the tube when design our purification housing. I may began to test our transducer with Yuhao and Jake next week too.
* **Summary of weekly advisor meeting**

we will have meeting with advisor next week.