# EE/CprE/SE 492 WEEKLY REPORT 04

**Group number: 23**
**Project title: Experimental Exploration of 5G-and-Beyond Wireless Systems and Rural Broadband**
**Client &/Advisor: Dr. Hongwei Zhang**

## Team Members/Role:

- Zachary Zemlicka – CYB E
- Joshua St John – CPR E
- Varun Advani – CPR E
- Jared Melcher – S E
- Lukas Zerajic – CPR E
- Christopher Sell – CYB E

○ **Weekly Summary**

The group continued their work on labs and wiki pages alike. Each team member was able to connect to the ARA sandbox from personal machines, run existing scripts, and create/edit new scripts of their own. Each partner group has dedicated time towards finishing one lab for each module. The goal was to gain edit access to the sandbox, and now that each group member has, the completion of lab scripts is forthcoming.

○ **Past week accomplishments**

**Varun**: Setup the VMs with UHD and GNURadio to start designing the labs. Wrote sample scripts to test hardware functionality and started with writing the scripts for the labs.
**Chris**: Began work with the ARA Sandbox. Created and gained access to all necessary components needed for creation of experiments/labs in the future (VMs, licenses, containers, jumpbox credentials).

**Josh**: Finished Module 2.1 and 2.2 Wiki pages. Also finished Quizzes with the modules that were completed. Planning on labs for Modulation and demodulation techniques.

**Jared**: Helping to create scripts for filters for our module. Ported another Python script already created so that it would export an image of a scatter plot instead of just printing it using text to the screen. Documentation still needs to be added to use sftp to get the image off of the server but that shouldn't be too hard.

**Lukas**: Attended and participated in all group discussions, recorded meeting notes, completed python script for low pass filter, implementing scripts for other filters (part of lab module), assisted with Jared in providing a separate form of frequency response plotting (matplotlib).

**Zach**: Work on material concerning module 4 which consisted of completing wiki pages and quizzes. Also gathered material to start working on the labs that are within module 4. On top of that I attended all group meetings and contributed to group discussions.

o **Pending issues** *(If applicable: Were there any unexpected complications? Please elaborate.)*

**Varun**: N/A

**Chris**: N/A

**Josh**: N/A

**Jared**: N/A

**Lukas**: N/A

**Zach**: N/A

o **Individual contributions** *(Creating this section is optional, but it is **Required to include the "Hours Worked for the Week" and their "Total Cumulative Hours" for the project for each member somewhere relevant in your report. Your individual weekly hours should be at a minimum of 6-8 hours for this course. So please manage your time well. Also, ensure that individual contributions support your claim to the weekly hours. Be honest with the reports.**)*

| NAME | Individual Contributions <br> *(Quick list of contributions. This should be  short.)* | Hours this week | HOURS cumulative |
|---|---|---|---|
| Josh | -Module 2 sections 1 and 2 starting <br> -created workspace environment to be enabled to edit learning platform materials <br> -Reading books over modules. | 12 | 23 |
| Chris | - Split the group into teams <br> - Delegated modules for each team <br> - Began work on Module 2 | 5 | 17 |
| Jared | - Creating labs for Module 3 <br> - Met with lukas to figure out scripting | 4 | 25 |
| Lukas | - Started planning/implementation of module 3 <br> - Recorded meeting notes | 3 | 17 |
| Zach | -Completed wiki and quiz material for module 4 <br> -Created and completed a lab for module 4 | 6 | 21 |
| Varun | -Moved Module 0 to our repository <br> -Refined Module 01 <br> -Began planning of Module 04 | 8 | 24 |

- o **Comments and extended discussion**

  The total hour column above may be inaccurate or fewer than the hours actually spent. Some students did not record their hours from the first week of school, hence the difference.

- o **Plans for the upcoming week**

  **Varun**: Varun will work continue to work on the experiments with physical hardware for module 4 and work on planning the capstone lab with Zach

  **Chris**: Chris will finish up 2.3 and 2.4 wiki pages by next Friday and continue brainstorming/experimenting with the ARA container for lab ideas.

  **Josh**: Will be working on lab setups for all modules that I will be performing on and how these labs can evolve to the capstone lab. Will also continue Wiki-Pages and quizzes for other modules and sections

  **Jared**: Jared and his teammate will meet together and finish implementing filter labs. Information from the lab creation then needs to be pushed to the website when it is complete.

  **Lukas**: Lukas will continue to meet with Jared to fully implement Module 3's lab. After the lab is fully implemented and tested, the remaining materials for Module 3 will be finished.

  **Zach**: I will ensure that module 4 is fully completed as well as get started on another module.

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## Midterm Feedback:

1. Summarize the feedback you received (both written and verbal).
   a. **Read > Quiz > Lab (it's a good order)**
   b. **Embedding quizzes into wiki pages is helpful**
   c. **Good that our plan for using Javascript/coding is completely done**
   d. **Continue working on the labs - talk to the right ARA people, etc**
   e. **Improve visuals for quizzes - section them off, dividers to split them up**
2. Describe any new insights your team generated based on this feedback.
   a. **Our project is a pretty big undertaking**
   b. **It's not easy to learn/become the expert and then also teach it**
   c. **Our demo looks like we've done a lot of progress**
   d. **Add a Q&A/Forum section for setup (don't need to go talk to advisor)**
   e. **Make a template module (then copy/paste that module for easy expandability)**
3. What steps are you taking based on the feedback?
   a. **Add a Forum/FAQ (google doc or new wiki section) for issues that you (possibly) face while doing the labs**
   b. **Improve visuals for ease of reading**
   c. **Continue to reach out to the right people at ARA to help us solve our problems**