**Week 2**

**Team 38: Fuel Cell Monitor**

**Jessica: App/Database system**

Week 2 completed: Connection and read from database completed

Week 3 To-Do: Fix Graph UI for both historical graph and status graph

**Rana: MCU Processing System**

Week 2 completed: PIC/ESP PCB design completed.

Week 3 To Do: SPI communication with ADC. Error using the peripheral library. Also need to order parts that are not in stock.

**Sameer: Power System**

Week 2 Completed: Wasn’t getting any voltage across a certain resistor. Fixed problem by replacing that resistor and a diode next to it with newer parts just in case that resistor or diode were broken. The DC/DC converters and isolated DC/DC converter work as expected now.

Week 3 To-Do: There are voltage readings everywhere now. The expected output voltage on the voltage reference is 2.048 VDC, I’m getting 3.5 VDC. Need to figure out what the issue is here.

**Russell: Internal Data Transfer and Conversion/PCB**

Week 2 Completed: Finished PCB design and is ready to Order, Compile parts list for Future Order

Week 3 To-Do: Order Remaining Components, Review PCB with Dr. Lusher, Order PCB.

**Week 3**

**Team 38: Fuel Cell Monitor**

**Jessica: App/Database system**

Week 3 completed: Connection and read from database completed. Still having issues with rendering values on the graph.

Week 4 To-Do: Continue fixing graph UI for both historical graph and status graph. Discuss ideas for historical graph format with Lusher.

**Rana: MCU Processing System**

Week 3 completed: Fixed the error of the peripheral library.

Week 4 To Do: still having some problems with the SPI communication. Review the SPI communication with Dr. Lusher.

**Sameer: Power System**

Week 3 Completed: Fixed the output of voltage reference by taking out one of the op amps from the board. It was most likely a faulty part or not soldered on properly. Getting correct voltage readings everywhere and all parts work as expected.

Week 4 To-Do: Waiting for PCB to get delivered to solder on components.

**Russell: Internal Data Transfer and Conversion/PCB**

Week 3 Completed: Waiting for power system confirmation.

Week 4 To-Do: Order Remaining Components and PCB.

**Week 4**

**Team 38: Fuel Cell Monitor**

**Jessica: App/Database system**

Week 4 completed: Connection and read from database completed. Still having issues with rendering values on the graph due to asynchronous timing. Discussed changes to historical graph with Lusher to be a strip chart analyzing fuel cells by the hour for the day.

Week 5 To-Do: Continue fixing graph UI for both historical graph and status graph.

**Rana: MCU Processing System**

Week 4 completed: I Spoke with Dr.Lusher and told me that I was using an old library.

Week 4 To Do: still having some problems with the SPI communication. Review the SPI communication with Dr. Lusher.

**Sameer: Power System**

Week 4 Completed: PCB is ordered. Waiting for it to arrive.

Week 5 To-Do: Update validation plan and presentation 3.

**Russell: Internal Data Transfer and Conversion/PCB**

Week 4 Completed: PCB has been ordered, All parts have been ordered

Week 5 To-Do: Update validation plan for more strenuous testing, update FSR, ICD, and ConOp, and Practice Soldering. Update presentation 3.

**Week 5**

**Team 38: Fuel Cell Monitor**

**Jessica: App/Database system**

Week 5 completed: Able to display values on graph now.

Week 6 To-Do: Restructure historical graph.

**Rana: MCU Processing System**

Week 5 completed: I Spoke with Dr. Lusher and completed the SPI code

Week 6 To Do: validate the SPI code with the oscilloscope

**Sameer: Power System**

Week 5 Completed: Power system soldered on integrated PCB. Everything working as expected.

Week 6 To-Do: Start soldering the buffer system and the internal signal transfer subsystem.

**Russell: Internal Data Transfer and Conversion/PCB**

Week 5 Completed: PCB has been received, power system is soldered and is being tested, validation plan was updated waiting for Prof. Nowka Presentation feedback.

Week 6 To-Do: solder and debug PCB

**Week 6**

**Team 38: Fuel Cell Monitor**

**Jessica: App/Database system**

Week 6 completed: Able to display values on graph correctly now.

Week 7 To-Do: Restructure historical graph.

**Rana: MCU Processing System**

Week 6 completed: Fixed issue with board connecting to the MPLAB

Week 7 To Do: validate the SPI code with the oscilloscope

**Sameer: Power System**

Week 6 Completed: Power system and buffer system soldered on integrated PCB. Voltage outputs as expected.

Week 7 To-Do: Start soldering the internal signal transfer subsystem (ADC, optoisolators).

**Russell: Internal Data Transfer and Conversion/PCB**

Week 6 Completed: Power and buffer system have been soldered and tested.

Week 7 To-Do: finish solder and debug PCB

**Week 7**

**Team 38: Fuel Cell Monitor**

**Jessica: App/Database system**

Week 7 completed: Table updates dynamically now.

Week 8 To-Do: Restructure historical graph. Begin integration efforts.

**Rana: MCU Processing System**

Week 7 completed: Validated the SPI code with an oscilloscope, outputting – because its not connecting to ADC.

Week 8 To Do: integrating with internal data transfer subsystem.

**Sameer: Power System**

Week 6 Completed: Power system and buffer system soldered on integrated PCB. Voltage outputs as expected.

Week 7 To-Do: Start soldering the internal signal transfer subsystem (ADC, optoisolators).

**Russell: Internal Data Transfer and Conversion/PCB**

Week 7 Completed: Full PCB has been soldered. Power distribution has been tested and verified.

Week 8 To-Do: Integrate software and APP, Validate system integrations.

**Week 8**

**Team 38: Fuel Cell Monitor**

**Jessica: App/Database system**

Week 7 completed: Table updates dynamically now.

Week 8 To-Do: Restructure historical graph. Begin integration efforts.

**Rana: MCU Processing System**

Week 8 completed: Started integrating with the internal data transfer subsystem

Week 9 To Do: Issue with chip select, it always stays high or low and it doesn’t toggle.

**Sameer: Power System**

Week 6 Completed: Power system and buffer system soldered on integrated PCB. Voltage outputs as expected.

Week 7 To-Do: Start soldering the internal signal transfer subsystem (ADC, optoisolators).

**Russell: Internal Data Transfer and Conversion/PCB**

Week 7 Completed: Full PCB has been soldered. Power distribution has been tested and verified.

Week 8 To-Do: Integrate software and APP, Validate system integrations.

**Week 9**

**Team 38: Fuel Cell Monitor**

**Jessica: App/Database system**

Week 7 completed: Table updates dynamically now.

Week 8 To-Do: Restructure historical graph. Begin integration efforts.

**Rana: MCU Processing System**

Week 9 completed: Talked to Dr. Lusher told me to use GPIO instead of SS and change it to high and low when needed in the code

Week 10 To Do: fix the chip select issue.

**Sameer: Power System**

Week 6 Completed: Power system and buffer system soldered on integrated PCB. Voltage outputs as expected.

Week 7 To-Do: Start soldering the internal signal transfer subsystem (ADC, optoisolators).

**Russell: Internal Data Transfer and Conversion/PCB**

Week 7 Completed: Full PCB has been soldered. Power distribution has been tested and verified.

Week 8 To-Do: Integrate software and APP, Validate system integrations.

**Week 10**

**Team 38: Fuel Cell Monitor**

**Jessica: App/Database system**

Week 7 completed: Table updates dynamically now.

Week 8 To-Do: Restructure historical graph. Begin integration efforts.

**Rana: MCU Processing System**

Week 10 completed: Talked to Dr. Nowka, and fixed the issue with Chip Select works properly now. There was an issue with send data to the database, fixed that issue using Ardunio IDE and now user can choose the wifi they would like to use.

Week 11 To Do: UART connection not working. There was an issue with the ESP32 hardware, then it was fixed and it was saying that there was no data being sent, now its saying UART isn’t available at all.

**Sameer: Power System**

Week 6 Completed: Power system and buffer system soldered on integrated PCB. Voltage outputs as expected.

Week 7 To-Do: Start soldering the internal signal transfer subsystem (ADC, optoisolators).

**Russell: Internal Data Transfer and Conversion/PCB**

Week 7 Completed: Full PCB has been soldered. Power distribution has been tested and verified.

Week 8 To-Do: Integrate software and APP, Validate system integrations.