Fuel Cell Monitor System

Rana Kortam, Russell Wells, Sameer Osama, Jessica Odutola

**SCHEDULE**

Revision – 2

4 December 2022

Fuel Cell Monitor Execution Plan Fall 2022

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  | 9/5/2022 | 9/12/2022 | 9/19/2022 | 9/26/2022 | 10/3/2022 | 10/10/2022 | 10/17/2022 | 10/24/2022 | 10/31/2022 | 11/7/2022 | 11/14/2022 | 11/21/2022 | 11/28/2022 | DATE |
| **TEAM DELIVERABLES** |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Understand Project Problem |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Project design Overview |  |  |  |  |  |  |  |  |  |  |  |  |  | Completed |
| Divide Into Subsystems |  |  |  |  |  |  |  |  |  |  |  |  |  | In Progress |
| ConOps Report |  |  |  |  |  |  |  |  |  |  |  |  |  | Not Started |
| Create Major Parts List |  |  |  |  |  |  |  |  |  |  |  |  |  | Behind Schedule |
| FSR, ICD Report |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Midterm Presentation |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Order Major Parts |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Status Update Presentation |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Final Presentation |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Final Demo |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Final Report |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| **POWER SUBSYSTEM** |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Determine IC Components |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Design Schematics |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Order IC components |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Create PCB footprints in Altium |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Create PCB design in Altium |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Make Gerber files and send to FEDC |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Test components on circuit board |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| **INTERNAL SIGNAL SUBSYSTEM** |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Determine IC Components |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Design System |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Order Components |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Create PCB Schematic |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Assemble and Test Demo |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Create PCB Design |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Order PCB |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| **MICRO CONTROLLER SUBSYSTEM** |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Determine Microcontrollers in use |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Learn IDE to code microcontroller |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Implement "Hello World" on ESP32 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| WiFi connection on ESP32 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| UART on ESP32 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| UART on PIC32 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Array code for PIC32 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| SPI AD Converter code |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Connect ESP32 to database |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| **APP SUBSYSTEM** |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| App Displays "Hello World" |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| App Displays Home Page |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| App Displays all pages needed |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| AWS Database Created |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Tables Populated in Database |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Connect Database to App |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| App Sends Alerts to Users |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| App Works with Test Data |  |  |  |  |  |  |  |  |  |  |  |  |  |  |