**EE/CME 495 Project Management Update**

Group Number: 5

Group Members: Jordan Smith, Thomas Hu, Jason Wong

Dates Covered: October 18, 2019 to October 31, 2019

Part 1: Analysis of Task Progress

Shown below is the work completed by the group during the time period of October 18, 2019 to October 31, 2019.

The task numbers in the tables of this document correlate to the task numbers shown in the Work Breakdown Structure table found in revision 2 of CD2 – EE495/CME495 Project Plan.

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Task** | **Initial Completion (%)** | **Planned Completion (%)** | **Actual Completion (%)** | **Planned Hours** | **Actual Hours** |
| 4.0 Create Requirements Specification | 12.5% | 100% | 100% | 7 | 7 |
| 5.0 Draft Detailed System Design Document | 0% | 50% | 0% | 15 | 0 |
| 5.1 Perform System Design | 0% | 50% | 0% | 4 | 0 |
| 5.1.1 Create Block Diagram | 0% | 50% | 0% | 1 | 0 |
| 5.2 Perform Hardware Design | 0% | 50% | 0% | 10 | 0 |
| 5.2.1 Draft Design Schematics | 0% | 50% | 25% | 5 | 1 |
| 5.2.2 Spec System Components | 50% | 100% | 100% | 5 | 2 |
| 5.3 Research Code Design | 0% | 25% | 25% | 5 | 3 |
| 5.3.1 Design Source Code | 0% | 25% | 10% | 5 | 1 |

Shown in the table below is the planned and actual number of hours spent by each team member.

|  |  |  |  |
| --- | --- | --- | --- |
| **Group Member** | **Planned Hours** | **Actual Hours** | **Main Tasks** |
| Jordan Smith | 20 | 12 | 5.2, 5.2.1, 5.2.2 |
| Jason Wong | 12 | 5 | 5.2.2, 5.3, 5.3.1 |
| Thomas Hu | 12 | 7 | 4.0, 5.1, 5.1.1 |

Significant Deviations to the Project Plan are described below:

Jordan Smith has made contact with IMO and is giving the requirements for gearing down the rotating table to an operable speed. Jordan is reviewing plans to use a 3-phase induction drive for this. In addition, Doepker has requested looking into reusing an existing gearbox they already have as an alternative design.

Jason Wong was working on researching the microcontroller for the rotational table and decided to go with an Arduino. In addition, Jason began to research how the motor would be coded for the Arduino. Some time was also spent on designing how the code should work for the motor.

Thomas Hu was not able to work on any of the system design because the requirements were not finalized yet before the end of the project management update period. This will be performed and completed in November.

Part 2: Future Task Planning

Shown below is the work that is planned to be completed by the group during the time period of November 1, 2019 to November 21, 2019.

|  |  |  |  |
| --- | --- | --- | --- |
| **Task** | **Initial Completion (%)** | **Planned Completion (%)** | **Planned Hours** |
| 5.0 Draft Detailed System Design Document | 0% | 75% | 22.5 |
| 5.1 Perform System Design | 0% | 100% | 8 |
| 5.1.1 Create Block Diagram | 0% | 100% | 2 |
| 5.2 Perform Hardware Design | 0% | 50% | 5 |
| 5.2.1 Draft Design Schematics | 25% | 50% | 7 |
| 5.2.2 Spec System Components | 50% | 100% | 4 |
| 5.3 Research Code Design | 25% | 40% | 3 |
| 5.3.1 Design Source Code | 10% | 25% | 2 |
| 6.0 Interim Project Presentation | 0% | 100% | 8 |
| 6.1 Interim Project Report | 0% | 80% | 15 |

Shown in the table below is the planned number of hours to be spent by each team member.

|  |  |  |
| --- | --- | --- |
| **Group Member** | **Planned Hours** | **Main Tasks** |
| Jordan Smith | 26.5 | 5.2, 5.2.1, 5.2.2, 6.0, 6.1 |
| Jason Wong | 25 | 5.2.2, 5.3, 5.3.1, 6.0, 6.1 |
| Thomas Hu | 25 | 4.0, 5.1, 5.1.1, 6.0, 6.1 |

Part 3: Risk Mitigation

A major technical risk to the project is the time it takes for the supplier and client to order the correct parts needed for this project. This poses a problem because it can potentially delay the progress of our project if we do not have all the parts to begin assembling and testing. We are trying to mitigate this risk by maintaining professional communication with the suppler/client and responding to emails as quick as possible.

The problem with the memory management for the initial position and recall position for the motor is still ongoing. This means our previous estimated time may be inaccurate and our future projections will be higher. To mitigate this risk, we are going to start researching and testing on a smaller motor on how to deal with this problem. Jason Wong will research the idea of memory management for the positioning problems.