ACTION ITEMS

TEAM 12: Active Prosthetic Arm

Due Date:

Wednesday, March 13, 2019 5:30pm

The following are the Action Items from last week:

Team Member: Felicity Escarzaga

| Action Item | Date Due | Date Completed | Result/Proof of Completion |
|-------------------------------|----------|-------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 1. Finish Midpoint Report | 3/15 | 3/14 | Completed Sections 7.1.1 Completed Sections 7.2.1 Edited Sections Previously worked on Active Prosthetic Hand Midpoint Report Tons Members: Janual Boolerist Allian Ender Felicity Ender Announts Cons Midpoint Report Midpoint Report |
| 2. Resize Cuff to fit forearm | 3/27 | 3/16 | Cuff size intersects forearm for attachment. |

| 3. Reprint Cuff | 3/27 | 3/27 | Cuff reprinted not shredded. Electronics case fits and works properly. Cuff design is finished with scalability down to 2.25 inches diameter and up to 6 inches diameter before features break. |
|-----------------------|------|------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 4. Calibrated Printer | | 3/25 | Prusa i3 Mk3 has been calibrated and set up. Is not ready for print Prusa i3 Mk3 has been calibrated and set up. Is not ready for print Prusa i3 Mk3 has been calibrated and set up. Is not ready for print Prusa i3 Mk3 has been calibrated and set up. Is not ready for print Prusa i3 Mk3 has been calibrated and set up. Is not ready for print Prusa i3 Mk3 has been calibrated and set up. Is not ready for print Prusa i3 Mk3 has been calibrated and set up. Is not ready for print Prusa i3 Mk3 has been calibrated and set up. Is not ready for print Prusa i3 Mk3 has been calibrated and set up. Is not ready for print Prusa i3 Mk3 has been calibrated and set up. Is not ready for print Prusa i3 Mk3 has been calibrated and set up. Is not ready for print Prusa i3 Mk3 has been calibrated and set up. Is not ready for print Prusa i3 Mk3 has been calibrated and set up. Is not ready for print Prusa i3 Mk3 has been calibrated and set up. Is not ready for print Prusa i3 Mk3 has been calibrated and set up. Is not ready for print Prusa i3 Mk3 has been calibrated and set up. Is not ready for print Prusa i3 Mk3 has been calibrated and set up. Is not ready for print Prusa i3 Mk3 has been calibrated and set up. Is not ready for print Prusa i3 Mk3 has been calibrated and set up. Is not ready for print Prusa i3 Mk3 has been calibrated and set up. Is not ready for print Prusa i3 Mk3 has been calibrated and set up. Is not ready for print Prusa i3 Mk3 has been calibrated and set up. Is not ready for print Prusa i3 Mk3 has been calibrated and set up. Is not ready for print Prusa i3 Mk3 has been calibrated and set up. Is not ready for print Prusa i3 Mk3 has been calibrated and set up. Is not ready for print Prusa i3 Mk3 has been calibrated and set up. Is not ready for print Prusa i3 Mk3 has been calibrated and set up. Is not ready for print Prusa i3 Mk3 has been calibrated and set up. Is not ready for print Prusa i3 Mk3 has been calibrated and set up. Is not ready for print Prusa i3 Mk3 has been calibrated and set up. |

| 5. Updated Amanda | 3/25 | Updated Amanda (Nate's Mom) on current progress through text message. Sent her a picture of current prototype. |
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| 6. Created Pins for springs | 3/26 | Pins go inside spring and attach to forearm and cuff |

Team Member: Antoinette Goss

| Action Item | Date Due | Date Completed | Result/Proof of Completion |
|----------------------------------------|-----------|-------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Complete new modifications to the palm | 3/20/2019 | 3/20/2019 | CAD design will be finished by tonight for printing. However, here is a sketch of what the new palm will be like. Least left pain Convect attachment Thumb connection Callows for retation of Thump Th |

| Work with janelle for finger attachments | 3/27/2019 | 3/27/2019 | In progress- with the palm being adjusted, the finger adjustment will be fixed for later this week. |
|------------------------------------------|-----------|-----------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Complete Edits midpoint report | 3/15/2019 | 3/15/2019 | Edits for assigned section was completed by approximately 9:30 of Friday. In charge of editing sections 1,4,5, and 7.1.1 and 7.1.3. Janelle was consulted for these edits and I completed the final adjustments for the report and submitted. Active Prosthetic Hand Midpoint Report Tran Members: Janel Report Midpoint Report |
| Test new attachment | 3/13/2019 | progress | Top attachment is too big. Is being rescaled and printed when new palm is done. |

Team Member: Jannell Broderick

| Action Item | Date Due | Date Complet ed | Result/Proof of Completion |
|-------------------------------------------------------------------------------------------------|-------------|-----------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Finish Edits (sections 2,3,6,EXECUTIVE SUMMARY, and 7.1.2) and add Sections to proposal (7.2.4) | Mar 15 | Mar 15 | The report was edited to have proper tense and the suggested edits were made for sections 2,3,6,EXECUTIVE SUMMARY, and 7.1.2. Toni was responsible for the other section edits. Toni was consulted with for these edits. Section 7.2.4 was added and discusses the changes made to the finger designs. |

| | | | Active Prosthetic Hand Midpoint Report Tree Members: Jamel Broderisk Affian Carlor Felicy Energy Amstern Cons Midpoint Report |
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| Modify rotating base of thumb (needs to allow the tendons to run through while and keeping it's range of motion) | Mar 27 | Mar 15 | The base of the thumb needs to be able to rotate but tendons run through the base to bend the distal segments. To keep the tendons from being affected by the rotation the tendons were given special channels. See image. This design may be changes to having straight channels and the palm will be altered to have slits |
| Work with the team to ensure all subsystems connect properly | Mar 27 | Incomplete | for the tendons. Each subsystem is going through a series of changes and improvements. So, connecting must wait. |
| Work with Toni to connect fingers to palm. | Mar 27 | Incomplete | Once again the finger and palm designs have changed. So, this has been moved back. |
| Update website with new reports and presentations | Mar 27 | Mar 27 | The updated report was added to the website! https://www.cefns.nau.edu/capstone/projects/ME/ 2018/18F12 ActiveProsthetic/ |

Team Member: Allison Cutler

| Action Item | Date Due | Date Completed | Result/Proof of Completion |
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| Print forearm and write dimension changes on arm as necessary for servo motor incorporation | 3/27/19 | 3/19/19 | Machine tolerance was underestimated in the part dimensions, so parts do not fit together Design does not incorporate lid so that motors can be inserted Front of forearm (the black piece) has a hole in it for the motors |

| Work on brainstorming attachment to Palm (with or without Toni depending on Spring Break) | 3/27/19 | 3/27/19 | will most likely do pin and hole attachment like cuff Alternative attachment is the rotation and locking mechanism like the forearm has Questions to answer: should diameter of forearm at end change to match the palm, should palm increase diameter to match forearm, or should there be no diameter change? |
|-------------------------------------------------------------------------------------------------------|-----------|---------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Make adjustments for spring attachment | 3/27/19 | 3/19/19 | |
| Pick up ordered parts | 3/27/19 | 3/23/19 | the ends have holes for the spring support |
| | 3, 2., 13 | | |

The following are the Action Items for next week:

| Team Member | Action Items | Date Due |
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| Felicity | Develope Ankle attachment Fit electronics Add to code | 1. 4/3/2019 2. 4/3/2019 3. 4/3/2019 |
|------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------|
| Antoinette | Complete Hardware review 2 report Print part in time for report and testing Complete new adjustments in CAD Work with Janelle about Finger placement Work with Allison for Forearm attachment Help Allison with Lid Mechanism | 1. 3/29/2019 2. 3/29/2019 3. 3/27/2019 4. 4/3/2019 5. 4/3/2019 6. 4/3/2019 |
| Jannell | Work with Toni to connect fingers to palm Work with the team to ensure all subsystems connect properly Ensure fingers are able to be scaled to individuals Print Fingers and attach to other subsystems | 1. 4/3/2019 2. 4/3/2019 3. 4/3/2019 4. 4/3/2019 |
| Allison | Work with Toni to get palm attachment Complete forearm section of HR2 Set up UGRADS poster template Implement dimension changes to forearm Work with Toni and Felicity to get lid-mechanism working on forearm | 1. 4/3/19 2. 3/29/19 3. 4/3/19 4. 4/3/19 5. 4/3/19 |