

Bold = from syllabus

Blue = Sub-steps

Red = Final goals

Green = From Prof Malali

- **Powered Single Joint Finger (plastic) (1/31)**
 - Based on our test rig, we want to control this with the two loose flex sensors on the garden glove
 - Control for position
- **Powered Multi-joint Finger (plastic)**
 - Based on the orange finger that has been printed and the code from the single joint finger
- **Five minute update (2/7)**
 - Control for position, possibly for force
- **Smooth Functioning Data Glove**
 - Improved from the garden glove
 - Should have data for each joint of all 5 fingers, and an E-stop button,
 - Should have wire and wireless connection to the prototypes
 - Should have data for both position and force
- **Prototype Specification Report (2/28)**

Focuses on the engineering specifications for your prototype design. Your team should enumerate the particular specifications that your prototype (and attendant sub-systems) must meet. Intended engineering solutions and design choices based on those specifications should be thoroughly explained including any supporting analysis and experimental results which clarify the validity and completeness of the engineering design specifications.
- **Five minute update (3/7)**
- **First metal finger Joint??**
 - Could be a good idea to get a few of the fingers machined and moving smoothly, so we can dial in the ideal tolerances and material before we start applying power
 - Also a good time to think ahead about how we're gonna add sensors to the metal fingers
- **Prototype Evaluation and Testing Report (3/28)**

Concentrates on the evaluation and testing of the developed prototype (and sub-systems). It will include a statement of work for prototype assessment which includes how the prototype's performance will be evaluated. The report will also focus on how the intended test matrix assists both in determining the efficacy of the prototype (and sub-systems) in fulfilling their intended design goals but also the refinement of the relevant engineering design specifications utilized in prototype re-design. The document should also include an updated budget and schedule for the semester.
- **Powered single Joint Finger (Metal)**

- Reproduce the work we did on the plastic model to make it work with new metal fingers
- Incorporate new Data glove, and have an E-stop button on the hand itself
- May need physics-based model for this one
- **Five minute update (4/11)**
- **Fully functional metal hand with Palm and Thumb**
 - Reproduce four fingers, and a thumb for the hand
 - Incorporate pressure sensors into the fingers, for feedback
- **Final Website Update (5/12)**
- **Add how the team works together to the website**
 - Everyone's roles and how the roles have evolved coming into the new semester
 - Team building initiatives
 - How brainstorming sessions work
 - How subteams are assigned
- **Add a cultural, societal, and economic impact study to the website**
 - Use the prototype design to fill in these details
 - What specifically in textiles is the prototype useful in
- **More specifics about how the prototype works added to the website**
 - Details from five minute presentation