

Meeting Minutes:

September 10, 2013

- Team Formation
- Team Members
 - Jordan Simonson
 - Matt Guthrie
 - Jennifer Rainey
 - Samantha Sutherland
- Mentors
 - Dr. Tom Hess
 - Chris Ohlinger
- Client
 - Lisa Huffman of Puget Sound
- Team Member Roles:
 - Jordan- Meeting Organization
 - Allyson – Client Contact
 - Jennifer – Documentation
 - Matt- Budget
 - Samantha – Project Manager
- Meetings will be scheduled 4:00 – 5:00 p.m. every Thursday in EP 324A

September 12, 2013

- Finalized & Signed Team Contract
- Allyson emailed Lisa on what her expectations of a working prototype were and what commercial liners we should be familiar with
- Team needs to start researching
 - Different liners & pin sizes
 - Allyson will ask Lisa to send us liners
- Allyson will send Lisa finalized contract and ask her about user specifications

September 19, 2013

- Allyson has update from Lisa
 - She is sending liners and amputated leg mold to us
 - Budget is \$3000
 - Lisa is willing to meet in person and/or skype

- Client emails will be placed in dropbox and project learning will be posted on google site
- Need to brainstorm questions for client meeting
- Schedule a skype session with Lisa in two weeks
- Areas of project learning to look in to:
 - Competitive products, observations, interviews, and industry standards

September 26, 2013

- Jennifer will go to Seattle to pick up liners & mold
- Jennifer put research template in dropbox
- Samantha is working on schedule for entire year
- Need to finalize questions by Monday, send to Lisa, and will have conference call with Lisa on Thursday

October 3, 2013

- Dr. Hess needs logbooks in his mailbox by Tuesday night
- Jennifer will work on compiling portfolio
- Everyone needs to have two research articles by Monday
- Allyson scheduled shop orientation for Thursday at 4 pm
- Jordan is going to wiki workshop on Tuesday
- Everyone needs to bring a sketch for snapshot day by next meeting
- Next meeting is at Wednesday, 3:30 pm
- Conference Call with Lisa
 - Learned dimensions of liners and pin sizes
 - Explained the average patient
 - Need to design for patients with limitations in flexibility, hand dexterity, and vision

October 9, 2013

- Jennifer brought a list of needs for specifications
- Need to have table of specifications done by snapshot day (Tuesday)
- Snapshot Poster must contain:
 - Descriptive Project Title
 - Problem Statement
 - Design Goals
 - Table of Specifications

- Results of Project Learning
 - Concept Development
 - Project Plan
- Samantha will look into setting up a trip to Lewiston VA
- GJ shop workshop at 4:00 pm tomorrow
- Everyone showed preliminary sketches
- Meet Monday at 3:30 in GJ 108 to work on Snapshot Day

October 14, 2013

- Allyson brought dimensional analysis of liners
- Project Title: Transtibial Prosthetic Liner Donner
- Problem Statement: Design a system to aid lower limb amputees in donning their prosthetic liner. The design ensures the pin is aligned correctly for a patient with low flexibility, dexterity, or vision. The product should be comfortable, easy to use, work with current commercial pin locking liners, and reduce strain for the patient during the donning process.
- Design Goals:
 - Accommodate each liner size and variations in liners
 - Keeping the pin correctly aligned
 - Easy to use
 - Ergonomically comfortable
 - Make commercially available
- Specifications
 - Specs on liners: Allyson's dimensional analysis of liners
 - Specs on user
 - Specs on design
- Project Learning:
 - VA will get back to us by the end of October
 - Research design templates

October 17, 2013

- Look at track systems, expanding ring, cup-base
- Electronic & mechanical systems
- Put on a stand with wheels & axis so that it is easy to move and rotate
- Concentrate on the garter & tracks for now, mobility later
- Divide & conquer projects between team members
- Look at track systems & slippage
- Start meeting additionally on Wednesdays

October 23, 2013

- Allyson brought ideas for track and rack& pinion idea
- Matt has family friend that has a transtibial prosthetic leg and is willing to meet with us
- Discussed having a grooved pin-cup to guide the umbrella, hollow point for the pin
- Hinged arms that will create an angle at the connection point to track
- Design Challenges:
 - Create the garter and then do force tests with a rough mark up
 - Pressure sensors on the top and sides of the garters so that once there is no more pressure, the garter stops and reverses
 - Average length of the liners?
- Allyson has the force meter and wrist straps

October 24, 2013

- Design Review
 - 11/4 to 11/15 or can happen after Thanksgiving
 - Specifications, constraints, deliverables, alternatives
 - Rationales, pros & cons
 - Conceptual design
 - Update client, information sharing
- Create solidworks rendered models for alternatives
- Bring concept design by Thursday, October 31st.
- Will contact Lisa Huffman for design review day/time
- Ordering a sock donner

October 30, 2013

- Testing
 - GLX sensing device
 - Test sometime next week
 - Take dimensions of mold
- Lisa Huffman has sent pins to Dr. Hess
- Find application for design review
- Discussed piston idea instead of track system
- Top designs will be rendered in solidworks

October 31, 2013

- Design Review
 - Scheduled for 11/6/13 @ 3:30
 - Cost estimates needed
 - Needs to be moved to later date
 - Powerpoint
 - Testing information
- Test forces next Tuesday
- Average liner length : 12 – 16"
- Go to hardware store to buy materials for force testing

November 6, 2013

- Force testing was completed 11/5, discussed results
- Design Review
 - Wednesday, November 20th at 3:30
 - Powerpoint Slides
 - Design Alternatives

November 14, 2013

- Design review powerpoint is on google drive so that everyone can work on them
- Discussed force testing, need to complete force diagrams
- Need to buy rods that are only threaded on the end or non-threaded rods and thread the ends ourselves
- Will meet on Tuesday to have a test run for the design review
- Will get price estimates for linear actuators and track systems