Master Project Management Plan

# General Roll assignment:

Based on each group members particular experience, general rolls were assigned for building/assembly of the bot.

Electronics: Assigned to Ivan for mechatronics minor/experience

Fabrication: Assigned to Cole for FEA/welding/machining through MET.

Organization/model management: Assigned to Nishagar

# Term Meeting Schedule/ Location:

This varies by week due to everyone’s work schedule, however all three gather every Wednesday at 2:00 pm to touch base, assign responsibility until the following meeting if we are unable to gather again, and otherwise decide our next meeting time before the following Wednesday. This time is also used to consult with our advisor, Professor James Black.

# File Sharing

During the first scheduled meeting it was decided that GitHub would be our method of editing/sharing files via a shared repository. It is excellent at saving old versions of texts, spreadsheets, and models, and each member has an individual copy on his hard drive until they are ready to be merged.

# Group Leadership Schedule/Member Assignments:

# 9/12/18 Leader: Cole

* Meet advisor and set up weekly meeting time/place
* Deliver first progress memo
  + Assigned to group

# 9/19/18 Leader: Cole

* Level 1 requirements started
* Ongoing group rules document updated
* Wrote problem statement
  + Assigned to Ivan Albert
* Started Gantt chart
  + Assigned to Cole Trugman
* Start background section
  + Assigned to Nishagar

# 9/26/18 Leader: Ivan

* In coming week will start on design specifications
* Combined individual background sections

# 10/03/18 Leader: Ivan

* Nishagar and Cole were assigned to Level 1 Design Specifications
* Ivan was assigned to Design alternatives.
  + - Making tables with ranking -2 to 2 gives a clear picture of the ideas the team have and their effectiveness
* Discussed possible design and the requirements
  + - Can have both fast rollers in the front, and the wedge in the back as a defense weapon system
    - The direction of the rollers effects the motion of the bot when hits the opponent.

# 10/10/18 Leader: Nishagar

* Turn in design specs and alternatives draft
* Decided to design for a minimum pushing/push resisting force of 20 lb.
* Decided to design for a minimum speed of about 1 fps both as a defensive tactic as well and a way to make the wedge offensive.
* Discussed utilizing aluminum 6063 for its light weight and easy machinability/weldability with the possibility of implementing a thin (1/8”) layer of ar400 steel to protect the soft aluminum
* See “design specs” for other choices made this week.

# 10/17/18 Leader: Nishagar

* Update Master Project Plan (Started virtual design journal through github where it is accessible/ changeable for all members to record design ideas)
  + Assigned to Cole
* Started google doc for design journal/ place for sharing new thoughts/design ideas.
* Turn in weekly progress memo

# 10/24/18 Leader: Cole

* Perform peer review
  + Assigned to group
* Prepare/present preliminary design
  + Assigned to group (Meet Saturday 10/20 to finalize powerpoint)

# 10/31/18 Leader: Cole

* FMEA
  + Electronics Assigned to Ivan
    - Microcontroller (motor control), Battery, wiring, code, Drive/Weapon Motor, Peripheral Controller,
  + Assigned to Cole:
    - Roller failures (Bent axle, motor/roller connection, )
    - Chassis (Component protection, structural integrity)
  + Assigned to Nishagar
    - Manufacturing/Process (Tolerances, machining, assembly issues, competition rules)
    - Wheel Sub-assembly (bent/sheared axle, shape abnormalities, lost/damaged wheel, damaged bearing)

# 11/7/18 Leader: Ivan

# Master Project Schedule Update

* + Assigned to Ivan
* Division of jabs for the coming week
  + Nishagar assigned to failure calculations
  + Ivan assigned to component selection
  + Cole assigned to model finalization

# 11/14/18 Leader: Ivan

* Progress Memo
  + Assigned to Cole

# 11/21/18 Leader: Nishagar

* Progress Memo
  + Assigned to Ivan

# 11/28/18 Leader: Nishagar

* Critical Design Review (CDR)
  + Group assignment
* Draft Analysis and Manufacturing Plan Appendix
  + Assigned to Cole and Nishagar
* Progress Memo
  + Assigned to Ivan

# 12/5/18 Leader: Cole

* Progress Memo
  + Assigned to Nishagar

# 12/12/18 Leader: Cole

* Final written report due Monday (Includes "Drawing Package"  
  and "Manufacturing Plan" Appendices, Updated Master Project Schedule, and all other elements defined on website format guide.)
  + Assigned to group
* Complete orders and supporting documentation
  + Assigned to Ivan
* Deliver CDRs by Tuesday 6:00 pm
  + Assigned to Cole
* Progress Memo
  + Assigned to Nishagar

# 12/19/18 Leader: Ivan

* Progress Memo
  + Assigned to Cole

# Gantt chart updated 11/8/18

