

Sample REU Plan

Project: Design of New Speed and Acceleration Measurement Device for Wheelchair Testing

Week 1: 5/28 – 6/1

Review pertinent wheelchair testing standards

Observe current device during testing and brainstorm new solutions

Become familiar with encoder and investigate sample code and/or begin writing custom code

Week 2: 6/4 – 6/8

Continue with encoder data collection/analysis code

Investigate appropriate hardware/supplies at HERL (wheels, bearings, etc)

Become familiar with Solidworks

Milestone – Have working collection/analysis code.

Week 3: 6/11 – 6/15

Continue Solidworks tutorials/practice

Decide on hardware/supplies

Week 4: 6/18 – 6/22

Continue Solidworks tutorials/practice

Begin designing device integrating encoder, wheels, etc.

Make outline for paper

Milestone – Have complete outline for final paper

Week 5: 6/25 – 6/29

Complete first design iteration

Begin paper writing (Intro/background, Methods)

Milestone – Build 1st prototype, complete intro section of paper

Week 6: 7/2 – 7/6

Test 1st prototype, make any necessary design changes

Continue paper writing (Methods, Results)

Milestone – Complete Methods section of paper

Week 7: 7/9 – 7/13

Finalize design and test next version

Continue paper writing (Results, Discussion, Abstract)

**Milestone – Build final device that performs as well or better than current device,
Complete results section of paper**

Week 8: 7/16 – 7/20

Work on final paper - **Complete paper due by 7/30**