Class project: Force plate measurements
Dept. Mechanical Science and Engineering
University of Illinois at Urbana-Champaign
Developed by: Asst. Professor Mariana Kersh and Deen Farooq
Spring 2017

DUE ON COMPASS May 03 2017
(50% of total project grade)

Assignment: Write a six-page paper summarizing the experiment and findings.
12 pt font, 1.5 spacing
(maximum, not including references – may include appendix for extra figures, calculations)

All figures should have a caption below the image and be numbered
All tables should have a caption above the table and be numbered

The paper must contain the following parts:

1. Header: Team name, team members, date

2. Introduction (16% points)
   Introduce the general idea behind the experiment and WHY it was interesting or useful.
   Provide at least three references from Google Scholar, PubMed, or Web of Science, to motivate why this experiment is interesting or useful. Wikipedia is NOT a reference.
   State the specific aim of the experiment.
   State any hypotheses.

3. Methods (24%)
   Describe how you went about answering your question. Consider using diagrams or pictures to help illustrate your idea. Include:
   a. Indicate if IRB was completed
   b. What equipment you used to perform your test
      i. Include equipment name, manufacturer
      ii. Include software name and version numbers
   c. How many subjects did you test, how many test per subject
   d. What specifically did you will measure (e.g. GRF, etc), include sampling frequency
   e. How did you post-process the results (e.g. filtering, provide details)? What calculations were performed?
f. Which statistical tests did you use to analyze the data, what was the alpha and p-value you used?

4. Results (25%)
   a. Summarize the results in a meaningful way – Do not write “Figure 1 shows the results from the EMG measurements”, instead write “EMG magnitude decreased over time when subjects were asked to hold the mass at 0 degrees of elbow flexion (Fig 1)”
   b. Do not state the obvious or rattle off a list of numbers/stats
   c. See discussion in class on presenting results

5. Discussion (25%)
   a. Describe your main findings in the context of what motivated this study
   b. Was the hypothesis confirmed? If so, what does this mean? If not, what may explain this?
   c. How do your results compare to other similar studies (include references?)?
   d. What are the limitations of the study?
   e. What could be improved?

6. References (10%)
   Mandatory
   Mendeley is a free reference manager software that can help you cite and write. Check the library website: http://uiuc.libguides.com/mendeley

Your write-up for each project must be typed.