

## ISE 311: Ergonomics & Work Measurement

### Homework #2

(due: Monday, January 14, 2013)

Read chapter 2 in your textbook and answer the following. (NOTE: use the links provided on the course website to access the ERGO software designed to accompany the textbook. If you do not yet have your textbook, you may use this software and other online sources to answer the following questions.)

1. (Review question 1, pg. 50) Where in the body do you have each of the following types of joints: ball and socket, hinge, pivot, and fixed?
2. (Review question 4, pg. 50) Sketch a 1<sup>st</sup>-, 2<sup>nd</sup>-, and 3<sup>rd</sup>-class lever for the human body.
3. (Review question 14, pg. 50) If you design a foot pedal for the distance an average person can reach, what percent of the population will not be able to reach the pedal?
4. (Review question 18, pg. 50) Design a tote pan that 95% of employees can lift. Assume the mean for what a person can lift is 20 kg and 1 standard deviation is 5 kg.