



IE 553 Lab. 1

STRENGTH AND EMG ANALYSIS OF

THE UPPER EXTREMITY

Group #3

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October 25, 2006



Experimental Setup

- Randomized complete block design
- Depended variables: EMG and Force
- Independent variable: angle
- Six levels for this factor (*180, 155, 130, 105, 80, and 60 degrees*)
- 3 replicates for each angle
- Blocking on the replicate number -blocks time (i.e. fatigue)
- One subject tested - minimizes randomness



Picture 1: angle used by the group



Results

- Calibration Factor: 0.08²
(Calibration Factor = Average (Force/EMG))
- EMG/Force vs. Angle

A EML S
 B
 C
 D

