AME 21216 – Score Sheet

A9 – Spring-Mass Oscillator

NDID#:_____

For more details on any of the items below, please refer to the lab handout.

Item and Description	Points Awarded	Possible Points
Technical writing – Using the correct format, address all questions from the lab handout in the paragraphs.		3
A plot of acceleration (m/s^2) vs. time (s) for one of the data sets. (Show only two periods of oscillation.)		4
A plot of velocity (m/s) vs. time (s) computed from the previous acceleration data set. . (Show only two periods of oscillation.)		4
A plot of spectral density (amplitude vs. freq.) of the Y acceleration data computed using the FFT code on the A9 web page		4
A table containing the following parameters: • **The measured mass of the weight with electronics mounted *m* (kg).** • **The measured spring constant *k* (N/m).** • **The *theoretical* natural resonance frequency f_n (Hz).** • **The natural resonance frequency f_n (Hz) measured using the stopwatch.** • **The natural resonance frequency f_n (Hz) determined from the FFT plot.**		5
TOTAL		20

NOTE: Although measured data is typically plotted as individual markers, transient signals (such as acceleration vs. time) should be plotted as a continuous line.