

## AME 21216 – Deliverables Score Sheet

A10 – Transient Signals

Author name or NDID: \_\_\_\_\_

Lab Section (Day/time): \_\_\_\_\_

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

Item and Description	Points Awarded	Possible Points
<b>Paragraphs and Captions on plots</b> – Please include a caption and a paragraph (separate from plot) describing each plot.		5
<b>Plot of measured transient temperature <math>T</math> vs. <math>t</math></b> (both heating and cooling on same plot)		2
<b>Plot of linearized temperature data <math>y(t)</math> vs. <math>t</math> with linear curve fits for time constants</b> (both heating and cooling on same plot)		2
<b>A table containing all 4 extrapolated time constants <math>\tau</math> for the thermocouples in water</b>		1
<b>Plot of measured amplitude vs. driving frequency with theoretical curve for ultrasonic transducer</b>		3
<b>Damping ratio <math>\zeta_{UT}</math> for the ultrasonic transducer*</b>		1
<b>Plot from FFT code of baseball bat amplitude vs. frequency</b>		1
<b>Plot of measured strain gauge output vs. time with curve fit for baseball bat</b>		3
<b>Ringling frequency <math>f_d</math> and damping ratio <math>\zeta_B</math> for the baseball bat*</b>		1
<b>TOTAL</b>		19

\*These should go in the paragraphs and/or captions corresponding to the respective plots.

### Guidelines for Deliverables

- All figures and tables are properly labeled (i.e. Figure 1, Table 1, etc.) with captions.
- All plots should be made in Matlab. Do NOT use excel to make plots.
- Axes on figures must be labeled with units, and plots with multiple data sets must include a legend.
- Note that any curve fit or theoretical curve must be plotted as a *smooth, continuous* line. (i.e. Make a new vector using linspace() for the independent variable.)
- Equations must be numbered, and the variables must be defined (i.e. “where  $c$  is the speed of sound.”).
- Variables should be written in italics.
- Students, please **print and proofread** the hardcopy of your deliverables before you turn it in. Sometimes, equations and figures do not print correctly!