

## AME 21216 – Tech Memo Score Sheet

A9 – 1<sup>st</sup> Order Transient Response

NDID#: \_\_\_\_\_

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

Item and Description	Points Awarded	Possible Points
<b>Technical writing and format</b> – Please address all questions from the lab handout in the paragraphs and captions. You should have the relevant equations in your paragraphs!		5
<b>Plot of measured transient temperature <math>T</math> vs. <math>t</math> for the response to an impulse</b> (both heating and cooling on same plot)		4
<b>Plot of oscillatory heater power <math>q</math> and transient temperature <math>T</math> vs. <math>t</math> both on the same plot</b> (Use “yyaxis left” to plot heater power on the left. Use “yyaxis right” to plot temperature on the right.)		5
<b>A table containing:</b> <ul style="list-style-type: none"><li>• Measured air temperature <math>T_{Air}</math></li><li>• Measured maximum temperature <math>T_{max}</math></li><li>• Time constant <math>\tau</math></li><li>• Non-dimensional parameter <math>\omega\tau</math> for the oscillating heat source</li><li>• Measured time lag <math>\Delta t</math></li><li>• Theoretical time lag <math>\Delta t</math></li><li>• Measured peak-to-peak amplitude of temperature oscillation</li><li>• Theoretical peak-to-peak amplitude of temperature oscillation</li></ul>		8
<b>TOTAL</b>		22