

## AME 20216 – Score Sheet

A7 – Microcontrollers

Names: \_\_\_\_\_

The following items will be *demonstrated* to the lab instructor during the allotted lab time. Credit will not be given for portions completed outside of lab.

Item and Description	Points Awarded	Possible Points
<b>Part I: Potentiometer</b> Turning the potentiometer correctly adjusts the brightness of the LED. The PWM signal is visible on the oscilloscope.		4
<b>Part II: Temperature Measurement</b> The thermistor is correctly wired up in a voltage circuit. The correct temperature is displayed in the Arduino serial monitor.		3
<b>Part III: Temperature Alarm</b> The alarm lets out a short chirp every second if the measured temperature is above 302 K.		3
<b>Part IV: Design Challenge 1</b> <ul style="list-style-type: none"><li>The threshold temperature is adjustable with the potentiometer.</li><li>The threshold and measured temperatures are printed to the serial monitor.</li></ul>		4
<b>Part V: LCD Screen - Hello World!</b> The Hello World! message is printed to the LCD screen.		3
<b>Part VI: Design Challenge 2</b> <ul style="list-style-type: none"><li>The LCD screen displays the measured temperature and the threshold temperature.</li><li>The buzzer chirps if the measured temperature is above the threshold.</li></ul>		3
<b>Clean-up</b> The students returned the lab bench to its initial state.		2
<b>TOTAL</b>		22