

## AME 30358 – In-Lab Demonstration Score Sheet

### M3 – Thermostat

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

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

The following items will be *demonstrated* to the lab instructor during the allotted lab time. These points will count towards the tech memo portion of your grade. Credit will not be given for portions completed outside of your 2-hour lab period.

| Item and Description   | Points Awarded | Possible Points |
|--|----------------|-----------------|
| <b>Subsystem A: Thermistor</b><br>The serial monitor displays the correct measured temperature values.   |                | 4               |
| <b>Subsystem B: Heater</b><br>The DC power supply is properly connected.<br>Connecting the heater causes the temperature to increase.  |                | 2               |
| <b>Subsystem C: Blower Fan</b><br>The fan repeatedly cycles ON for 5 seconds, the OFF for 5 seconds.   |                | 4               |
| <b>Complete Thermostat System</b><br>The thermostat turns the fan ON when the temperature reaches $T_{HS}$ , then turns the fan OFF when it cools to $T_{LS}$ .                  |                | 3               |
| <b>Design Challenge</b><br>The fan is constantly ON, and the temperature is regulated by switching the heater ON and OFF.<br>The system oscillates about the set-point of 306 K. |                | 5               |
| <b>Clean-up</b><br>The students returned the lab bench to its initial state.   |                | 2               |
| <b>TOTAL</b>   |                | 20              |