

# me162 – building systems

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## Week 4 Tutorial

The week we will focus on *Psychrometrics*.

### Psychrometrics

- a. Measure the temperature and relative humidity in the classroom and outside.
  - Use the digital meter
  - Make and use a wet and dry bulb thermometer
- b. Plot these points on the Psychrometric chart and plot what processes the air may have encountered as it entered this building from the outdoors.
- c. Review, in detail, the Psychrometric Summary and Examples handout.
  - Look at heating, cooling and mixing.
  - If there is time look at humidification and space conditioning (determining the supply air temperature).
- d. Question: If the classroom we are currently in was a little building all on its own, what would be the capacity (heating power) of the heating need to be? Assumptions:
  - It is cold outside and the heat loss, through the doors and windows, is 1,600 watts.
  - No people are in the room
  - The HVAC system is a standard one in that much of Supply Air (using the ACH method) is recirculated air but some comes from the outside as per ASHRAE 62.1