Review for Final Exam

See also:
Exam 1 prep
Exam 2 prep
Exam 3 prep
Exam Information

• 2 hours (strictly enforced)
• Resources allowed
  – The blue properties booklet
    • You can write anything you want in the white space of this booklet.
    • NO photocopies, no taping, pasting, photocopies, loose papers
  – A handheld calculator
    • No other electronic devices used including cell phones, computers, tablets, music players, etc.
Exam Information

• A table of conversion factors will be provided
• A psych chart (SI & English) will be provided
• NO interpolation should be necessary
• Material covered
  • All assigned reading to date
  • All in-class lecture material to date
  • All in-class problem solutions to date
  • All homework assignments to date
Do you know ...

- How to determine mixture properties?
  - Mole fraction, mass fraction, and mixture molar mass
  - Partial pressure of constituents
  - Internal energy, enthalpy, and entropy (on both mass and molar basis)
- How to use psychrometric charts?
  - Dry bulb, web bulb, and dew point temperatures
  - Water vapor partial pressure
  - Relative humidity and humidity ratio
  - Specific enthalpy and specific volume
- How to model air conditioning applications?
  - Heating and cooling w/o humidification/dehumidification
  - Adiabatic humidification (evaporative cooling)
  - Adiabatic mixing of moist air streams
- How to balance a chemical equation?
  - Find stoichiometric coefficients given fuel composition
  - Find fuel composition (molar and mass basis) given product composition
  - Determine molar and mass air/fuel ratio
  - Account for excess air (theoretical air)
  - Perform volumetric analysis of products
  - Estimate dew point of products
- How to find heats of reaction?
  - Correct for temperatures away from the SRS
  - Properly use heats of formation
  - Apply heats of reaction in the 1st law