

Things you should know from Thermodynamics → Lectures 1-12 (Exam 1)

- Keep track of units in all your calculations.
- PV diagrams: isotherms, wet/saturated region, and p-T *not* independent in wet region
- “Sealed and Rigid” combo → constant specific volume
- What percent of mass in a system is vapor? 100% is good quality steam
- Cycles start and end at same point
- Properties depend on their state, not the path.
- “Specific” means independent of mass (or a unit per mass)
- How to convert between mass and moles
- What are the units on molecular mass?
- Remember value/units of g_c , and when to use it
- Total energy is internal + kinetic + potential
- Looking up properties in tables
- Remember when to use c_v vs. c_p
- Ideal Gas Law – Recognize when you need to use absolute units
- Phase change *can* require a lot of energy
- How to use tables:
 - What table to use?
 - Subscripts of f and g
 - $\Delta_u = c * \Delta_T$ (incompressible)
- Follow Table 3.9 to identify the phase
- Boiling point → saturation temperature
- If it's incompressible → v and u are only a function of temperature
- Equations for quality – looking up information on table