Covered in Lecture:

- Interparticle forces
  - Ionic
  - Dipole-dipole
    - hydrogen bonding
  - London dispersion forces
    - instantaneous dipoles
    - induced dipoles

- Phase Changes
  - Names of changes
  - \( \Delta H \) for phases changes
  - Heating/cooling curves and calculations
  - Phase diagrams

- Properties of liquids
  - Viscosity
  - Surface tension
  - Capillary action
  - Vapor Pressure
    - vapor pressure curves

- Properties of solids
  - Amorphous solids
  - Crystalline solids
    - unit cells
      - types of unit cells
      - number of atoms in a unit cell
      - geometrical calculations in unit cells
    - X-ray diffraction
    - types of crystalline solids
      - ionic, network covalent, metallic, and molecular
    - metallic bonding and MOs
      - effect of temperature on conductivity
      - alloys (substitutional and interstitial)
    - semiconductors
      - n-type and p-type
      - effect of temperature on conductivity