

**Chem 431 Chapters 11 & 20 Study Questions** (Pages to read: 281-294, 550-573)

- What are the principal components of a mass spectrometer?
- How do each of the following ion sources work, and when would you use each one
  - Electron impact
  - Chemical ionization
  - Electrospray
  - Atmospheric pressure chemical ionization
  - Inductively coupled plasma
  - Laser ablation
  - Matrix-assisted laser desorption ionization
  - Secondary ion MS
  - Fast Atom Bombardment
- How do each of the following mass analyzers work?
  - Magnetic sector
  - Double focusing
  - Quadrupole
  - Time of flight
  - Ion Trap
- How do each of the following detectors work?
  - Electron multiplier
  - Faraday cup
  - Microchannel plates

Chapter-end problems: none