Summary

- Each electron state labeled by 4 numbers:

  n = principal quantum number (1, 2, 3, …)

  ℓ = angular momentum (0, 1, 2, … n-1)

  m_ℓ = component of l ($-\ell < m_\ell < \ell$)

  m_s = spin ($-\frac{1}{2}$, $+\frac{1}{2}$)
- Pauli Exclusion Principle explains periodic table
- Shells fill in order of lowest energy.