Unit 3 Study Guide – Aqueous Solutions
Chapter 4, 12.4-12.5 and 16.5

Stoichiometry
- Limiting reactants
- Mole Ratio
- Balancing Equations
- Mass → Mass Conversion
- Theoretical yield
- Actual yield
- Percent yield

Aqueous Solutions
- Nomenclature
- Solute
- Solvent
- Dilute
- Concentrated
- Molarity
- Molarity by Dilution
- Stock solution
- Standardized solution
- Electrolyte – strong and weak
- Non-electrolyte
- Solubility rules – soluble / insoluble compounds

Acids and Bases
- Strong vs. Weak Acid definition
- Strong vs. Weak Base definition
- pH
- Titration Curve
- Neutralization reaction
- Hydronium ion
- Monoprotic
- Diprotic
- Triprotic
- Salt
- Equivalence point
- Indicator

Chemical Reactions
- Particle View
- Precipitation
- Gas Evolution
- Molecular Equation
- Complete Ionic Equation
- Net Ionic Equation
- Spectator Ion

Oxidation-Reduction Reactions
- Oxidation
- Reduction
- Oxidation state
- Oxidizing Agent
- Reducing Agent

Laboratory Techniques
- Titration
- Choosing an Indicator
- Beer's Law
- Spectrophotometry

Suggested Figures to Review
- 4.4
- 4.5
- 4.6
- 4.9
- 4.10
- 4.11
- 4.12
- 4.13
- 4.14
- 4.15
- 4.18
- *4.20
- 4.21
- 12.11
- 12.12
- 12.13

Conceptual Connections
- 4.1
- 4.2
- 4.3
- 4.7
- 4.8
- 4.9
- 12.3
- 16.8