

Chemistry Unit 8 Outline: Acids and Bases

Chapter 15: Acids and Bases

Classes	Topics	Suggested Reading	✓	Assignments	✓
1	Physical and Chemical properties of acids and bases, Nomenclature of Acids and Bases, Arrhenius Acids and Bases, Brønsted-Lowry Acids and Bases, Hydronium Ion (H_3O^+), hydroxide ion (OH^-), Conjugate Acids and Bases, Strong and Weak Acids, Acid and Base Relative Strengths, Monoprotic, Diprotic and Polyprotic Acids, Amphoteric Substances, Oxo and Organic Acids	15.1 What are Acids and Bases (pg. 530 – 538)		pg. 538 #1 to 13	
2	Autoionization of Water, $K_w = [\text{H}_3\text{O}^+][\text{OH}^-]$, Acidic, Basic and Neutral Solutions, pH Scale and Calculations ($\text{pH} = -\log [\text{H}_3\text{O}^+]$ and $[\text{H}_3\text{O}^+] = 10^{-\text{pH}}$), pOH Scale and Calculations ($\text{pOH} = -\log [\text{OH}^-]$ and $[\text{OH}^-] = 10^{-\text{pOH}}$), Relationship between pH and pOH ($\text{pH} + \text{pOH} = 14$), Calculating $[\text{H}_3\text{O}^+]$, $[\text{OH}^-]$, pH and pOH with Strong Acids and Strong Bases, Indicators	15.2 Acidity, Basicity, and pH (pg. 539 – 547)		pg. 541 #1 to 5 (Practice); pg. 544 #1 to 4 (Practice); pg. 545 #1 to 4 (Practice); pg. 547 #1 to 15	
3	Neutralization Reactions, Acid and Base Salts, Stoichiometry of Neutralization Reactions, Acid-Base Titration, Endpoint, Equivalence Point, Choosing Indicator for Titrations, pH Curve (between Strong Acids and Strong Base Titrations), Chemistry of Acid Rain, Effects of Acid Deposition and Acid Rain	15.3 Neutralization & Titrations (pg. 548 – 56)		pg. 556 #1 to 4 (Practice); pg. 556 #1 to 12	
4	Lab #8: Acid and Base Titration (A & G Blocks: May 26, Thursday) (F Block: May 25, Wednesday)			<i>Lab #8 Report Due:</i> <i>(June 2, Thursday)</i>	
	Unit 8 Test (Cancelled) – Folded into Semester 2 Final Exam	Chapter 15 Review (Unit 8 Sample Questions)		pg. 566–570 #16 to 18, 20 to 22, 24 to 26, 29 to 32, 41 to 75 (odd), 76 to 79, 81 and 97a	