

Honour Chemistry Unit 5 Outline: Chemical Kinetics and Equilibrium

Chapter 14: Chemical Kinetics

Classes	Topics	Suggested Reading	✓	Assignments	✓
1	Reaction Rates, Collision Model, Factors Affecting the Collision Model (Activation Energy, Temperature, Particle Size, Concentration, Catalyst, Inhibitor)	14.4 & 14.6: Activation Energy, Temperature Dependence on Reaction Rates & Catalysis (pg. 471 to 473; pg. 480 to 486)		pg. 489–491 #27, 30, 31, 49 to 52, 75a, 75c, 76	

Chapter 15: Chemical Equilibrium

Classes	Topics	Suggested Reading	✓	Assignments	✓
1	Chemical Equilibrium, Properties of Chemical Equilibrium, Law of Mass Action, Equilibrium Expression, Equilibrium Constant (K), Homogeneous Equilibria, Equilibrium Expressions of Partial Pressures (K_p), Equilibrium Position, Heterogeneous Equilibria, Multiple Equilibria, Reverse Equilibrium Reactions and Multiplying Equilibrium Reactions	15.1: The Concept of Equilibrium (pg. 497 to 499) 15.2: Ways of Expressing Equilibrium Constants (pg. 500 to 507)		pg. 520 #1 to 4 pg. 520 #5 to 9	
2	Relationship Between Rate Constants and Equilibrium Constants and Expressions, Applications of Equilibrium (The Extent of a Reaction, Reaction Quotient, Q , Calculating Equilibrium Pressures and Concentrations – ICE Box)	15.3: What Does the Equilibrium Constant Tell Us? (pg. 507 to 512)		pg. 520–525 #11 to 26, 27 to 38, 54, 58, 60, 62, 78	
	Chapter 14 & 15 Take-Home Quiz (on 14.4, 14.6, 15.1 & 15.2) (B Block: Assign on April 12, Tuesday) (D Block: Assign on April 11, Monday)			Take-Home Quiz Due: (B Block: April 14, Thursday) (D Block: April 13, Wednesday)	
3	Le Châtelier's Principle (Effects of a Change in Concentration, Pressure, and Temperature)	15.4: Factors That Affect Chemical Equilibrium (pg. 512 to 519)		pg. 522–523 #39 to 52	
4	Lab #9: Chemical Equilibrium (B & D Blocks: April 25, Monday)			Lab Report #9 Due: (B Block: May 5, Thursday) (D Block: May 6, Friday)	
5	Unit 5 Test (April 28 Thursday)	Chapter 14 & 15 Homework Due (April 28, Thursday)			
	Senior 2nd Semester Final Exam (covers Unit 3 to Unit 5) (B Block: May 12, Thursday)				