

SUMMER 2025 ASSIGNMENTS for 3rd Edition Chemistry: Atoms First, Zumdahl**Date**

6/16	Equilibrium and Review Reading Problems	Z: 12.1-12.5, 12.7 Z: 12: 28, 30, 33, 37, 39, 47, 63, 68 R: 12: 3, 5, 6
6/17	Introduction to Acids and Bases, pH Scale Reading: Problems:	Z: 13.1-13.3, 13.6, Appendix A1.2 Z: 13: 20, 21, 23, 29, 35, 37, 39-41, 43, 45, 46, 53, 54, 83, 144 R: 13: 2-4
6/18	Calculating the pH of Acids and Bases Reading: Problems:	Z: 13.4-13.6, 13.12, Appendix A1.4 Z: 13: 30, 55, 57, 59, 64, 65, 67, 76, 77, 87, 89, 93, 94, 97, 99, 103, 104, 143, 161 R: 13: 5, 6
6/19	No Class	
6/23	Salts, Polyprotic Acids, Properties of Oxides Reading: Problems:	Z: 13.7, 13.8, 13.10 Z: 13: 27, 32, 34, 106, 109, 113, 115-117, 119, 123-125, 129, 135, 136, 155, 167, 183 R: 13: 7-9
6/24	Buffers Reading: Problems:	Z: 14.1-14.3 Z: 14: 10, 11, 17-20, 31-34, 39, 40, 47-50, 90 R: 14: 1-4
6/25	Titration Reading: Problems:	Z: 14.4 Z: 14: 12, 13, 55, 57-59, 61*, 94, 95, 97, 106 *For Exercise 14.61, only calculate the pH at 0.0, 10.0, 12.5, 20.0, 25.0, and 30.0 mL of NaOH added, then sketch the titration curve. R: 14: 5-7
6/26	Titration Reading: Problems:	Z: 14.4 Z: 14: 14, 15, 56, 60*, 63*, 65, 68 *For Exercises 14.60 and 14.63, only calculate the pH at the initial, half-way, and equivalence points, then sketch the titration curve. R: 14: 8

Z = Zumdahl, 3rd Edition (only evens collected) R = Review Questions (not collected)

Date

6/30	Enthalpy Review, Entropy	
	Reading:	Z: 7.2-7.5, 16.1-16.3
	Problems:	Z: 7: 15, 19, 69, 73, 75, 81, 83, 126 Z: 16: 11, 17, 25, 31-33, 41, 42, 83 R: 7: 8, 9; 16: 1-3
7/1	Free Energy	
	Reading:	Z: 16.4-16.6
	Problems:	Z: 16: 34-36, 38-40, 43-45, 48-51, 54, 57, 59, 62, 63, 82 R: 16: 4-6
7/2	Free Energy and Equilibrium	
	Reading:	Z: 16.7-16.9
	Problems:	Z: 16: 22, 66, 67, 70, 71, 73, 76-78, 93, 97, 99, 119 R: 16: 7, 8, 10
7/3	No Class	
7/7	Catch-up and Review	
7/8	Hour Exam I: noon-1:50	
7/9	Redox Review, Galvanic Cells, Standard Cell Potentials	
	Reading:	Z: 6.9; 17.1-17.3
	Problems:	Z: 17: 15, 17, 21, 22, 38, 43, 45, 48, 59, 60, 63, 65 R: 17: 2, 3
7/10	Electrical Work, Nernst Equation, Concentration Cells	
	Reading:	Z: 17.4-17.5
	Problems:	Z: 17: 23, 24, 54, 58, 69, 72, 80, 83, 84, 89, 91, 94, 120, 125, 130, 131, 147 R: 17: 4, 5, 6, 7
7/14	Corrosion, Electrolysis	
	Reading:	Z: 17.7-17.9
	Problems:	Z: 17: 19, 27-29, 95, 98, 99, 105, 107, 109, 112, 114, 129, 142 R: 17: 8, 9, 10

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Date

7/15	Bonding Review	
	Reading	S: 1, 2 Z: 3.1-3.2, 3.6, 3.7, 3.9 (Review) Z: 4.1-4.3 (up through p. 166), 4.7 (Review)
	Problems	H: 1.1: All Z: 4: 11, 16, 39-44, 57, 59, 97, 101 R: 4: 4, 5, 12
7/16	Molecular Orbital Model	
	Reading	Z: 4.4-4.6
	Problems	Z: 4: 18, 61, 62, 65-68, 70, 71, 74, 76 R: 4: 7-10
7/17	Intermolecular Forces and Liquids	
	Reading	Z: 9.1-9.4
	Problems	Z: 9: 5, 20, 21, 23, 24, 27, 34, 37, 39-41, 53, 61-66, 112, 130, 135 R: 9: 1, 2c-e, 3, 9-11
7/21	Introduction to Organic Chemistry, Alkanes	
	Reading	S: 3, 4, Appendix A Z: 21.1
	Problems	H: 1.2: All Z: 21: 5, 15, 16, 45 R: 21: 1
7/22	Alkenes, Alkynes, Isomerism	
	Reading	S: 5, 6, 9 Z: 21.2
	Problems	H: 1.3: All Z: 21: 33, 34, 41, 42, 104, 154 R: 21: 2, 6
7/23	Reactions of Alkenes, Alkynes	
	Reading	S: 5 Z: 21.2
	Problems	H: 1.4: 1-8 Z: 21: 61, 62, 64
7/24	Aromatics	
	Reading	Z: 21.3 H: 1.4: 9-11
	Problems	Z: 21: 46, 63 R: 21: 3, 4

S = Syllabus Lessons

Z = Zumdahl, 3rd edition (only evens collected)

H = Extra Problems Handout (all are collected)

R = Review Questions in Zumdahl (not collected)

Date

7/28	Catch-up and Review	
7/29	Hour Exam II – noon-1:50 pm	
7/30	Introduction to Kinetics, Rate Laws	
	Reading:	Z: 11.1-11.3
	Problems:	Z: 11: 17, 23, 26, 29, 31, 34, 36, 105
		R: 11: 1, 3
7/31	Integrated Rate Laws	
	Reading:	Z: 11.4
	Problems:	Z: 11: 37-41, 45-47, 51, 53-55, 57, 58
		R: 11: 2, 5, 6
8/4	Collision Model, Activation Energy, Catalysts	
	Reading:	Z: 11.6-11.7
	Problems:	Z: 11: 13, 18-20, 63-66, 76, 108
		R: 11: 9, 11
8/5 (noon)	Mechanisms	
	Reading:	Z: 11.5, Lecture handouts
	Problems:	H: Homework Exercise (Due at noon, 8/2)
		Z: 11: 59-62, 98
		R: 11: 7, 8
8/5 (1 pm)	Amino Acids and Proteins	
	Reading	S: 13
		Z: 14.4 (Review)
		Z: 21.6 (pp 871-873)
	Problems	S: pp. 126-127: 7(a-c), 8(a-c)
		Z: 14: 115
		H: 2.4: Problem 1 only
		Z: 21: 85, 87, 89, 93, 137
8/6	Catch-up and Review	
8/7	Reading Day	
8/9	Final Exam (10:15-12:45 p.m.)	

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