

CHEMISTRY 122 MINIMUM COURSE COVERAGE

Text—*Chemistry, 7th Edition, Zumdahl/Zumdahl*

Read all assigned chapters. While all of the assigned reading material is useful in gaining an understanding of chemical principles, some topics will be covered in less detail in the lecture than they are in the text. The assigned homework is designed to give practice on a range of representative problems and to provide some indication of relative emphasis on the various topics within each chapter. Answers to most, but not all, of the assigned problems can be found in the back of the book. This outline represents the minimum material that will be covered in all sections of Chemistry 122. Individual lecturers may assign additional readings and/or problems from the text or other sources for which you will be responsible on quizzes and hour exams.

MASS FINAL EXAMINATION: Friday, May 1, 2009, 3:00 – 5:00 p.m.

Please note the review scheduled at the end of the outline. The final examination in Chemistry 122 is comprehensive of the entire year's work in general chemistry and will cover material from **both the lecture and the laboratory**. While the chemistry faculty will provide considerable assistance in the review process, you should begin your own systematic review well before the end of the semester.

<u>Assigned Reading:</u>	<u>Questions and Problems:</u>
Chapter 12 Chemical Kinetics	17, 21, 25, 29, 31, 42, 43, 49, 51, 54, 55, 65(a,b), 79
Chapter 13 Chemical Equilibrium	17, 19, 25, 31, 33, 35, 37, 41, 43, 45, 47, 59, 63, 71, 75, 83
Chapter 14 Acids and Bases	19, 27, 29, 35, 39, 47, 49, 57, 61, 65, 69, 71, 75, 76, 79, 87, 89, 91, 99, 101, 105
Chapter 15 Applications of Aqueous Equilibria	15, 21, 23, 25, 33, 47, 53(a-d), 55(a,c,e,f), 75, 77, 81, 89, 91, 95, 97 (also, for review: 63 & 64 in chapter 4) [optional: 27(c,d), 29(c,d)]
Chapter 16 Spontaneity, Entropy, and Free Energy	7, (also, note: $\Delta S < 0$ for both processes), 27(a,b), 28(a,b), 31, 33, 35(b,c), 37, 43, 45a, 47, 51, 57, 61, 65, 71, 75, (also, if $[O_2] = [CO]$, what is the value of the ratio $[HgbCO]/[HgbO_2]$?)
Chapter 4 Sections 9 & 10 Types of Chemical Reactions and Solution Stoichiometry	(Redox): 19, 67(a-e), 69, 71, 73(a,b,c), 75(a,b), 79
Chapter 17 Electrochemistry	1, 13, 15(a,b), 19, 25b, 27b, 29, 35, 43, 45, 51, 55, 71, 73, 77a, 79a
Chapter 18 The Nucleus: A Chemist's View	3, 13, 14, 15, 17, 20, 21, 23, 25, 31, 33, 35, 37(Pu only), 39, 49, 53
Chapter 8 Section 13 Bonding: General Concepts	(also review 67, 71, 73, 75, & 79), 91, 93, 95, 97
Chapter 9 Section 1 Covalent Bonding: Orbitals	7, 10, 25(for 8.91 & 8.93), 27, 29, 31
Chapter 22 Organic and Biological Molecules	3, 11, 13, 14, 15, 21, 23, 25, 27, 31, 33, 35, 37, 47, 49(in part b, also give bond angles), 61(a,b), 75, 83, 85
Review	

Any student eligible for and requesting academic accommodations due to a disability is requested to provide a letter of accommodation from P.A.C.E. or Student Academic Support Center within the first two weeks of the semester.