

CH302 COURSE OUTLINE

Lecture	Day	Date	Topic	Lecture number Worksheet number	Quizzes and Exams
Physical and Chemical Equilibria, Intro to Aqueous Equilibria					
1	T	1/18	Physical Equilibria—Vapor Pressure	L1 and W1	
2	H	1/20	Phases and Phase Transitions	L2 and W2	
3	T	1/25	Solubility	L3	
4	H	1/27	Colligative Properties, Binary Mixtures	L4 and W3	
5	T	2/1	Reactions at Equilibrium, Mass Action Law	L5,6 and W4	Quiz 1
6	H	2/3	Equilibrium and Stress, Van't Hoff Equation	L6,7	
7	T	2/8	Aqueous Equilibria: Water autoprotolysis	L8 and W5, 6	
8	H	2/10	Aqueous Equilibria: Solubility	L9 and W7	
9	T	2/15	Aqueous Equilibria: Monoprotic acids and bases	L10,11 and W8	Quiz 2
Complex Aqueous Equilibria and Electrochemistry					
10	H	2/17	Buffers Systems and Neutralization	L12	
11	T	2/22	Titrations	L13	
	H	2/24	Overview of material on for Exam 1		
	H	2/24	Exam 1 from 7:30 till 9 pm		Lectures 1 - 9
12	T	3/1	A stepwise approach to pH calculations	L14	
13	H	3/3	Solving Complex Equilibria: Dilute Species	L15 and W10	
14	T	3/8	Polyprotic Acids	L16 and W10	
15	H	3/10	Balancing Redox Reactions	L17 and W11	Quiz 3
16	T	3/22	Electrochemical Cell Convention and Famous Batteries	L17 and W12	
17	H	3/24	Standard Cell Potentials	L17	Quiz 4
18	T	3/29	More advanced electrochemistry calculations	L18 and W13	
	H	3/31	Famous batteries and an overview of exam material	L24	
	H	3/31	Exam 2 from 7:30 till 9 pm		Lectures 10 - 18
Kinetics, inorganic chemistry and organic chemistry					
19	T	4/5	Reaction rates	L19 and W15	
20	H	4/7	Differential and Integrated Rate Laws	L20,21 and W14	
21	T	4/12	Kinetic Theory	L22 and W16	
22	H	4/14	Reaction Mechanisms and Famous catalysts	L22,23	Quiz 5
23	T	4/19	Famous Examples of Group I-IV Chemistry	L25 and W17	
24	H	4/21	Famous Examples of Group V-VIII Chemistry	L25 and W18	
25	T	4/26	Organic Chemistry-Hydrocarbons	L 26 and W19	Quiz 6
26	H	4/28	Organic Chemistry-Functional Groups	L 26	
27	T	5/3	Polymers and Biopolymers	L 27	
	H	5/5	Overview of material on Exam 3		
	H	5/5	Exam 3 from 7:30 till 9 pm		Lectures 19-27