Class #	Day	Date	Topic	
1	Fri	1/5	Review/Course expectations	
2	Mon	1/8	IMFs	Lewis structures, IMFs
3	Wed	1/10	Properties of Pure Liquids	surface tension, viscocity, capillary action, evaporation
4	Fri	1/12	Solutions	Dissolve vs. dissociate, strong electrolytes, likes dissolve likes
	Mon	1/15	MLK Holiday	
5	Wed	1/17	Colligative Properties introduction	Table to summarize important concepts
6	Fri	1/19	Colligative Properties	evap, vapor pressure, boiling point, Raoult's law
7	Mon	1/22	Finish Colligative Properties	boiling point elevation, freezing point depression, van't Hoff factor
8	Wed	1/24	Introduction to thermochemistry	heat capacity/specific heat, q = m s delta T, first law application
9	Fri	1/26	**Test 1**	
10	Mon	1/29	Measuring H: Calorimetry	
11	Wed	1/31	More on Enthalpy	develop potential energy diagrams, thermochemical equations
12	Fri	2/2	Hess's Law	Formation reactions, standard states, standard conditions, Hess
13	Mon	2/5	Spontaneity 1: Entropy and 2nd Law	define spontaneity, the need for S, definitions of S
14	Wed	2/7	More on Entropy	Statistical definition of entropy, Hess's Law with S
15	Fri	2/9	Spontaneity 2: Gibbs Free Energy	define G under constant T and P, dG = dH - TdS, Hess's Law with G
16	Mon	2/12	Catch Up and Thermo Practice	Practice problems at end
17	Wed	2/14	Collision Theory and Rate	criteria for successful collisions, define rate, and relate to rate of rxn
18	Fri	2/16	Rate Laws	Method of Initial Rates to find rate law. Units of k vs. overall order
19	Mon	2/19	Rate Laws & Integrated Rate Laws	opening rate law problem, integrated rate law use, graphical use
20	Wed	2/21	Half Life & Practice	deriving half life expressions, integrated rate law problems
21	Fri	2/23	Arrhenius Rate Law: T Dependence	catch up at beginning, Transition state theory
22	Mon	2/26	**Test 2**	
23	Wed	2/28	Mechanisms I	What is a mechanism, catalysts and intermediates
24	Fri	3/2	Mechanisms II	Validating mechanisms with given rate law
25	Mon	3/5	The Concept of Equilibrium	define eq, describing EQ (K & favored R or P), Kc vs Kp for gases
26	Wed	3/7	Q, K, Shifts, and ICE Tables	Define Q, Comparing to K, Shift, and ICE Table Intro
	Fri	3/9	**Spring Pause-No class**	
27	Mon	3/12	Solving EQ Problems	quadratic equation review, Finding EQ Conc, Finding K
28	Wed	3/14	EQ Practice & Le Chatlier's (V)	finish EQ calculations, Le Chat
29	Fri	3/16	Le Chatlier's Principle (n, P, T)	finish Le Chat
30	Mon	3/19	Thermo and EQ Connections	dG = dG0 + RT ln(Q) turns into dG0 = -RT ln(K) and problems
31	Wed	3/21	Acid-Base Theories	Arrhenius, Bronsted-Lowry & Lewis Theories, arrows, conjugate pairs
32	Fri	3/23	Identifying Acids/Bases and pH	Signs to identify acids/bases, autoionization, and pH for water solutions
33	Mon	3/26	Acid Equilibria	Ka defined, small x introduced, finding pH, finding Ka problems
34	Wed	3/28	**Test 3**	
35	Fri	3/30	Base Equilibria	Kb defined, finding pH, finding Kb problems
	Mon	4/2	Spring Break	
	Wed	4/4	Spring Break	
	Fri	4/6	Spring Break	
36	Mon	4/9	Acidic and Basic Salts	Identifying salts, acidic vs. basic salts, dissociation then equilbrium
37	Wed	4/11	Salt EQ and Buffer Concept	review of EQ process using salts (hydrolysis EQ), define a buffer
38	Fri	4/13	Buffers	Solving a buffer problem, HH equation
39	Mon	4/16	Titration Curves	Titrations and buffers; predict pH at given point in titration
40	Wed	4/18	Redox Reactions	Review redox, balance redox reactions
41	Fri	4/20	Standard Cells	Greenbowe Animation of Standard Cell, standard cell potential
42	Mon	4/23	Cell Notation and Concentration Cells	Greenbowe Animation of Concentration Cell, Employ Nernst EQ
43	Wed	4/25	**Test 4**	
44	Fri	4/27	EQ and Cell Potential	Compare Nernst to Thermo, find dG = -nFE relationships, Relate E to K
45	Mon	4/30	Electrolysis, Ksp or review??	