

Chemistry 131 Lecture Schedule (28 Lectures (L) 11 Problem Solving/Demo (PSD))

W 9/6	L	Course intro; PPT movie; Ch. 1 (HW1: 2: 19,33,53,55)
F 9/8		Convocation NO CLASSES
M 9/11	L	2.1-2.7: Atoms, Laws of definite and multiple proportions, Molecules
W 9/13	L	2.9-3.3: Quick periodic table, Naming compounds, Isotopes, Mole, Molar mass (HW 2: 2: 35,40,42; 3: 24,27,30)
F 9/15	L	3.4-3.5: % composition, Empirical formulae
M 9/18	L	3.6-3.8: Chemical eqs, Balancing eqs, Stoichiometry
W 9/20	L	3.9-4.2: Limiting reagents, Water-solvation, Electrolytes (HW3 38,40,46,47,56,57,64,89,99)
F 9/22	PSD	Movie on Mass spec/Steroid Testing Example/Mass spec & isotope problems
M 9/25	L	4.3-4.6: Molarity, Types of reactions, Precipitation, different types of equations
W 9/27	L	4.7-4.9: Selective precipitation, Stoichiometry using ppt rxns, Acid/Base rxns (HW4 4: 13,16,19,25,29,30,35,86)
F 9/29	PSD	Frozen Electrolyte Demo, Ion Channel/Precipitation Demo/Stoichiometry and Limiting reagent calcs
M 10/2	L	4.10: Balancing redox eqs
W 10/4	PSD	Burn Mg in CO <sub>2</sub> demo, Golden Penny Demo, Balancing redox equations examples (exam review?)
R 10/5		FIRST EXAM            8 AM Hubbell Auditorium
F 10/6	L	5.1-5.3: Ideal gas law, gas phase stoichiometry (HW5 4: 40,42,44,49)
M 10/9	L	5.4: molar mass, 5.5-5.7: Partial pressures, Kinetic theory, Effusion
W 10/11	L	5.8-5.9 more kinetic theory: mean free path, wall collisions and pressure.
F 10/13	PSD	Balloon in liquid nitrogen, dry ice acetone, Coke Can (HW6 4: 55,56,57,58,60,65)
M 10/16		NO CLASS FALL BREAK
W 10/18	L	5.10-5.11: van der Waals eq, atmosphere (H.W.7 5: 22,31,36,40,42)
F 10/20	PSD	Mix Bleach with acid (Cl) and Co complex (O <sub>2</sub> ), Genie in a Bottle
M 10/23	L	6.1-6.3 Equilibrium

W 10/25 L 6.4-6.6 Activity, heterogeneous eq., applications, Rxn. Quotient (H.W.8 5:43,49,63,71, 129)

F 10/27 L 6.7-6.8 Solving eq. problems, Le Chatelier

M 10/30 PSD Gas Problems /Exam Review

T 10/31 SECOND EXAM 8 AM Hubbell Auditorium

W 11/1L L More Le Chatelier (H.W.9 6: 18,19,21,23)

F 11/3 PSD Le Chatelier : Myoglobin/High Altitude, FeSCN plus stuff, Etc.

M 11/6 L 7.1-7.4 Acids/Bases, pH scale, Strong acids

W 11/8 L 7.5 weak acids, weak acid mixtures, percent dissociation (H.W.10 6: 25,28,29,31,33,39,41,46,49,60)

F 11/10 L 7.6-7.7 Bases, Polyprotic acids

M 11/13 L 7.8-7.9 Acidic/basic properties of salt solutions, H<sub>2</sub>O contribution to pH

W 11/15 PSD Acids and Bases at home, veggie indicators (H.W.11 7: 22,31,33,39, 43,59,72,73)

F 11/17 L 8.1-8.3 Common ion effect, Buffer solns.

M 11/20 L 8.1-8.3 Common ion effect, Buffer solns, (H.W.12:7: 76,89,101, Ch 8: 17,19,27)

W 11/22 THANKSGIVING BREAK NO CLASS

F 11/24 THANKSGIVING BREAK NO CLASS

M 11/27 L 8.3-8.4 Exact solution of buffer problems

W 11/29 L 8.5-8.6 Titrations, indicators (H.W.13 8: 47, 55, 68)

F 12/1 8.7-8.8 Polyprotic acids, K<sub>sp</sub>

M 12/4L PSD Effectiveness of Antacids and Buffers/Titration of Unknown Acid

T 12/5 THIRD EXAM 8 AM Hubbell Auditorium

W 12/6 L 8.9 K<sub>sp</sub> and quant. Analysis (HW 14 Ch8, 71,73, 84, 91)

F 12/8 L 8.10 Complex ion equilibria,

M 12/11 PSD Energy Release Demos (i.e. blow stuff up)

W 12/13 L Class Evaluations, "Final Review"

FINAL EXAM Tuesday, December 19, 7:15 PM Hubbell Auditorium