## Chem 220 Environmental, Analytical, and Geochemistry

Mod 2 Spring 2021

Week 1	
Tuesday, April 6	Wednesday, April 7
Le Châtelier <i>Lab pages 9-10</i>	Ions and Equilibria
Rain pages 36-37	Calculations and Review, Harris 1.2-1.3
Thursday, April 8	Friday, April 9
<b>Pipet</b> Lab pages 4-8, 11-12, 47-49, 52,	Acid Rain, <i>Rain 1A</i>
54-57, and <i>Harris 2.1-2.6, 2.9, 3.1</i>	Acid Rain Lab Rain 1B, 1C

	Monday, April 12 (Problems 2 due 8:15)
Week 2	Strong and Weak, Rain 2B, Harris 8.1, Tab8.1
	K <sub>a</sub> and K <sub>s</sub> , Rain 3A and Harris 1.5
Tuesday, April 13	Wednesday, April 14
(Pipet Lab due 8:15)	pH and $K_w$ , Rain 2C and Harris 8.2, 8.4
Lead Lab pages 13-15 and Harris 6.4	Error Analysis, <i>Harris 3.3, 4.1</i>
Thursday, April 15	Friday, April 16 ( <b>Problems 3 due</b> 8:15)
(Lead Lab due 8:15)	Confidence Limits, <i>Harris 4</i>
Copper Lab Rain 4B and Harris 6.2	Equilibrium Calculations, Rain 3B, Harris 8.6

Week 3	Monday, April 19 <b>Test 1 due</b> 9:45
	Systematic Method, Rain 3C, Harris 12.3-4
Tuesday, April 20	Wednesday, April 21
(Copper Lab due 8:15)	Log Concentration Diagrams, Rain 3D
Chloride Lab pages 16-18 and Harris 6.6	Ionic Strength, Rain page 147-8, Harris 12.1
Thursday, April 22	Friday, April 23 ( <b>Problems 5 due</b> 8:15)
(Chloride Lab due 8:15)	Ionic Strength, Rain App 3 and Harris 12.2
<b>Acid</b> Lab pages 19-22, 53, 43-44	Soil, Rain 4A

	Monday, April 26 ( <b>Problems 6 due</b> 8:15)
Week 4	Buffers, Rain 4C and Harris 9.1-5
	Titrations, Rain 4 and Harris 10.1-6, 9.6
Tuesday, April 27	Wednesday, April 28
{Acid Lab due 8:15)	$K_d$ , Extractions
Soil Lab Rain 5C and Harris 20.1, Box 13-2	Chromatography, Chemical Spills, Harris 21.1
Thursday, April 29	Friday, April 30
Soil Lab page 42 and Rain 5C, 5D	<b>Test 2 due</b> 9:45
	$D_0$ and $\alpha$ , Rain 4E and Harris 11.1, 11.3, 12.5

Week 5	Monday, May 3 ( <b>Problems 8 due</b> 8:15) CEC, <i>Rain 5A</i> Aluminum, <i>Rain 5B</i>
Tuesday, May 4	Wednesday, May 5 (Your draft due 8:15)
(Soil Lab due 8:15)	$K_f F_o$ and $\delta$ , Rain page 124 and Harris 13.1-2
<b>Blue</b> Lab pages 23-25 and Harris 18.2	[L], Rain pages 124-129
Thursday, May 6 (Symposium Day)	Friday, May 7 <del>(Group Paper due 8:15)</del>
	EDTA, Rain 5E and Harris 13.5-6
	Spectroscopy, Harris 19.1, 19.3

	Monday, May 10 ( <b>Problems 12 due</b> 8:15)
Week 6	Electrochemistry, <i>Harris 14.2</i>
	Coulometry, Nernst, <i>Harris 14.3-4, 14.6, 17.1</i>
Tuesday, May 11	Wednesday, May 12 (Spring Day)
Blue Lab pages 26-27 and Harris 19.2	
Thursday, May 13	Friday, May 14
(Blue Lab due 8:15)	<b>Test 3 due</b> 9:45
Bleach Lab pages 28-29	Measure activity, <i>Harris 15</i>

	Monday, May 17
Week 7	Cyclic, Nernst & K, Harris 14.5, Rain pages 155-9
	Redox, Harris 16 and Rain Appendix 4
Tuesday, May 18	Wednesday, May 19 (Problems 13 due 8:15)
(Bleach Lab due 8:15)	$S$ , $H^+$ and $K_f$
Electrode Lab pages 34-36	Precipitates, <i>Harris 7.1-2</i>
Thursday, May 20	Friday, May 21
(Electrode Lab due 8:15)	CO <sub>2</sub> , Harris Box 11-1
<i>pH</i> in biology	
Solid State	

Monday, May 24
<b>Test 4 due</b> 10:15