OCN 400: Lecture Schedule (version 9/26/01)

Date	Subject (Web Chpt # in Bold)	Libes Reading	P.S. / G.S.
I. The Chemistry of Seawater and Chemical Equilibria			
1 Oct.	Introduction (**1**)	ch 1 (pp 3-11)	
2	Properties of Seawater (**3**)	ch 2 (pp 12-29)	PS#1
3	Salinity/Major Ions (**4**)	ch 3,4 (pp 30-49),Pilson, Chpt.3	
4	Chemical Equilibrium (**5**)	Drever Handout	
8	Activity Coefficients (**6**)	ch 5 (pp 59-68)	
9	Chemical Equilibrium and Speciation (**6**)	ch 5 (pp 68-86)	PS#2
10	Chemical Equilibrium - Example problems		
11	Chemical Speciation - Example problems		
15	Principles of Mass Balance (**2**)		
16	Principles of Mass Balance (**2**)		
17	Why is SW salty? (**7**)	ch 21 (pp 338 - 362)	PS#3
18	Group Study #1 "What controls the Composition of Seawater?"	Read papers	
22	Group Study #1		GS#1
II. Biological Influences on Marine Chemistry			
23	Biological Production (**8**)	Ch 8 (129-141)	
24	Biological Production (**8**)		
25	Respiration (**9**)	ch 10 (162-166)	
29	Biolimiting Elements and distributions (**10**)	ch 9, 10 (pp 142-162)	
30	Biolimiting Elements - Trace Metals		
31	Group Study "Iron Geochemistry and	Read papers	
1 Nov.	Group Study Limitation of Plankton Growth"		GS#2
5	Gases in the atmosphere and seawater		
6	Gas Exchange (**11**)	ch 6 (pp 87 - 101)	PS#4
7	Acids and Bases (**12**)		
8	Acids and Bases (**12**)		
12	Holiday - Veteran's Day		
13	Carbonate Equilibrium - Carbonic Acid (**12**)	ch 15 (pp 242 -261)	PS#5
14	Carbonate Equilibrium - Alkalinity and total CO2 (**12**)		
15	Ocean Carbonate System (**13**)		
19	Particle Flux (**14**)		
20	The Redox Sequence (**15**)		PS#6
21	Diagenesis in Sediments (Suboxic and Anoxic Environments)		
22	Thanksgiving		
26	Group Study #3 "What Controls Atmospheric CO_2 and the Fate of Fossil Fuel CO_2"	ch 25 (pp447-465; 470-474) Read papers.	
27	Group Study #3 - Continued		GS#3
III. Chemical Tracers			
28	Isotope Geochemistry (**16**)	ch 28 (pp 517 - 556); ch 29 (pp. 557 - 562) ch 29 (pp 562-566; 569-581; 589 - 591)	
29	Stable Isotopes		
3 Dec.	Radiocarbon and Ocean Age (**17**)		
4	U-Th series isotopes - Scavenging (**18**)		
5	U-Th series isotopes - Gas Exchange		
6	Group Study #4 "Atmospheric Record in Ice Cores:	Read paper passed out.	
7	Group Study #4 Is the Past the Key to the Future"		GS#4
10	Review		
11	Review		
12	Review		
18	Final Exam 830-1020.		