

## Tentative Lecture Schedule

	Date	Topic	Chang's Chapter	PS Quiz
1	W Sep 1	Introduction		
2	F Sep 3*	(A) Kinetic theory of gas	2, 3	
	M Sep 6	Labor Day Holiday		
3	W Sep 8	(A) Kinetic theory of gas (cont.)	2, 3	
4	F Sep 10*	(B) Work, enthalpy, heat capacity	4	
5	M Sep 13			A
6	W Sep 15			
7	F Sep 17*	(C) Entropy and 2nd law	5	
8	M Sep 20			B
9	W Sep 22			
10	F Sep 24*	(D) Gibb's Free energy	6	
11	M Sep 27			C
12	W Sep 29			
	W Oct 6	Mid-term I (Adams Aud)		
13	F Oct 1*	(E) Probability in thermodynamics	23 and notes	
14	M Oct 4			D
15	W Oct 6			
16	F Oct 8*	(F) Molecular driving forces	6 and notes	
	M Oct 11	Thanksgiving Holiday		
17	W Oct 13	(F) Molecular driving forces (cont)	6 and notes	
18	F Oct 15			E
19	M Oct 18*	(G) Chemical potential	7	
20	W Oct 20			
21	F Oct 22			F
22	M Oct 25*	(H) Ionic solutions	8	
23	W Oct 27			
24	F Oct 29			G
	W Nov 3	Mid-term II (Adams Aud)		
25	M Nov 1*	(I) Chemical equilibrium and Electrochemistry (briefly)	9, 10	
26	W Nov 3			H
27	F Nov 5			
28	M Nov 8	(J) Chemical kinetics	12	
29	W Nov 10*			
30	F Nov 12			I
31	M Nov 15	(K) Intermolecular forces and molecular simulation	16 and notes	
32	W Nov 17			
33	F Nov 19*			J
34	M Nov 22	(L) Proteins and DNA	22	
35	W Nov 24			
36	F Nov 26*			
37	M Nov 29	Reviews		K
38	W Dec 1			
39	F Dec 3	Reviews		L
		Finals		

Instructor: Professor Hung-Wen Li

Goals: 1). Build up confidence on using quantitative (physical/chemical) approaches to define biological systems.  
2). Establish important physical chemistry concepts used in biological systems.

How to Succeed:

- 1). Come to lectures prepared. (i.e., do your pre-reading.)
- 2). Ask “why”, and participate in the class discussion.
- 3). Do your problem sets.

Lectures: M W F 12:35 PM---1:25 PM, Maass 112

Textbook: “Physical Chemistry for the Biological Sciences” by Raymond Chang, 2000 (same as previous years)

Secondary textbooks: (a few copies on reserve in Science Library)

“Molecular Driving Forces” by Dill  
(this excellent book covers module D, E and K on the driving forces)

“Physical Chemistry: Principles and Applications in Biosciences” by Tinoco  
(this book has examples of the relevance of Physical chemistry on life science)

Grading: 15% pre-reading quizzes (WebCT), and PS quizzes (in class)  
25% Mid-term I  
25% Mid-term II  
35% Final

This class is in **McGill’s Academic Integrity Honor** code (<http://www.mcgill.ca/integrity/>) on all quizzes and exams. Any violation of this honor code will result in the failing grade. No make-up exams, see grading policy on WebCT.

**Pre-reading quizzes** (\*) are designed to prepare you for the upcoming materials in class. They are posted in the WebCT, and should be done 1 hour before the class. These quizzes also serve the purpose to allow your lecturer explain the concepts that most people have trouble with in their reading. You are responsible for all the assigned reading materials, even if your lecturer decides not to cover them in class due to the time constrain. Those topics will surly appear in the exams!

Problem sets are designed to help you understand the concepts, and to help you prepare for the exams. **In-class PS quizzes** are designed to help you work on your PS, and will be done in the beginning of the assigned class (~5 minutes). They will be based on the PS questions assigned.

If you have questions about the class material, you should post the questions in the **WebCT discussion**. If you have questions, it is likely that another 50% of your peer will have the same question (but probably have no guts to ask). Posting the questions on the WebCT will allow us to clarify the questions and learn from others. You are doing everyone in class a favor!