

Tentative Schedule¹

Links to papers and assignments that are due are posted on the course website.

Date	TOPIC	HOMEWORK <u>DUE</u> for class
August		
26	Intro <i>What about scientific ethics?</i>	
28	<i>What about scientific ethics?</i>	Case Study
31	<i>What do/should you remember about thermodynamics?</i>	chapter 1 & 2
September		
2	<i>What do/should you remember about thermodynamics?</i> and Paper 1	chapter 1 & 2 Assignment #1 posted on website
4	Paper 2	Assignment #2 posted on website
7	<i>How does thermodynamics apply to metabolism?</i> <i>What does it mean for reactions to be coupled?</i>	chapter 3.1, 3.2
9	<i>What do we mean when we say that ATP hydrolysis is driving a reaction?</i> <i>What are the mechanisms through which this is accomplished?</i>	chapter 3.1, 3.2
11	Paper 3	Assignment #3 posted on website
14	<i>How do we know what drives protein folding?</i> <i>What is known about the pathway for protein folding?</i> <i>How is protein folding studied?</i>	chapter 3.5, 3.6

¹ This schedule is tentative and is subject to change. Any such changes will be stated in class. At all times, the schedule on the course's web-site takes precedence over this schedule.

16	cold denaturation expt	prep for denaturation expt
18	Cech papers	Assignment #4 posted on website
21	<i>RNA intro material</i> <i>What do we know about RNA folding?</i> <i>How is RNA folding studied?</i>	chapter 3.7, 3.8 (skim), 3.9
23	RNA folding pathways	Assignment #5 posted on website
25	continue with Das et al.	
28	<i>How is spectroscopy used by biochemists?</i>	
30	<i>What is fluorescence?</i> Paper 6 Scientific Revolution	chapter 6.1-6.5 Bussard, 2005 Assignment #6 posted on website
October		
2	...and some science Paper 7	Assignment #7
5	<i>continue reviewing the prion fluorescence paper</i>	
7	review/discussions	
9	EXAM I	
12	<i>How could we study the binding interactions between two molecules?</i> <i>When would such an experiment be useful?</i>	chapter 6.1-6.5
14	<i>How can we analyze binding data?</i>	chapter 6.6-end

16	tba	
17 - 25	FALL BREAK	
26	Paper 8: RNA-protein interactions	Assignment #8 posted on website
28	Paper 9: RNA-protein interactions	Assignment #9 posted on website
30	<i>What should you remember about kinetics? What are enzymes?</i>	review using chapter 4 focus on 4.1, 4.6, 4.7
November		
2	<i>What types of catalysis occur?</i>	review using chapter 4 focus on 4.1, 4.6, 4.7 FERSHT , pgs. 54-59
4	<i>What theories exist to explain biological catalysis?</i>	Assignment #10 posted on website
6	<i>What experiments can be used to study enzyme mechanisms? Understanding kinetics through the equations – Michaelis-Menton.</i>	chapter 5.1, 5.2 FERSHT , pgs. 103-112, 117-119 (H&I)
9	understanding kinetics derivations	
11	extra time for derivations	
13	Paper 10	Assignment #11 posted on website
16	<i>Is catalysis best improved by increasing specificity or reactivity?</i>	
18	Paper 11	Assignment #11 posted on website
20	<i>Inhibition</i>	

23	<i>Inhibition</i>	
25 - 29	<i>THANKSGIVING</i>	
30	<i>Review</i>	
December		
2	EXAM II	
4	<i>Special Topics</i>	Assignment posted on website
7	<i>Special Topics</i>	Assignment posted on website
9	summarize	
11	summarize	

Final: Friday, Dec 18, 8:30 – 11:30 AM