Biol 4478 or Biol 8803E Syllabus, Spring 2011

Class meets 8 to 9:30 AM Tuesday and Thursday Room 322 CE. There will be two tests and a final exam. Grading will be based on tests, final exam, out-of-class assignments, class participation, and presentations of designated papers.
Text will be handouts and 'Methods of Molecular Biophysics' by Serdyuk, Zaccai, and Zaccai. (optional)
Grading based on: 5% class participation
15% presentation & assignments
25 % test 1
25 % test 2
30 % final exam
* Students will be responsible for **one** oral presentation with another student or **one a**ssignment.

Date			topic	lect. #	
January					
	18	T	Macromolecules in solution	1	A
	20	TH	Thermodynamics I, basics	2	C
	25	T	Thermodynamics II, applications	3	C
	27	TH	Student Presentation	4	C
	1	T	Calorimetry, Diff.Scanning Calorimetry	5	C
February	3	TH	Isothermal Titration Calorimetry	6	C
	8	T	TEST 1	7	**test**
	10	TH	Analytical Centrifugation.	8	D
	15	T	UV-Vis Absorption spectroscopy	9	D
	17	TH	Gel electrophoresis	10	D
	22	T	Student presentation	11	E
	24	TH	IR absorption & Raman spectroscopy	12	E
	1	T	Fluorescence spectroscopy I	13	E
March	3	TH	Fluorescence spectroscopy II	14	EF
	8	T	Student presentation	15	EF
	10	TH	Opt.micro & Review	16	F
	15	T	TEST 2	17	Test
	17	TH	Opt. microscopy I	18	F
	22	T	Spring break		
	24	TH	Spring break		
	29	T	AFM microscopy	19	F
	31	TH	Fluorescence & Single molecule microscopy	20	EF -F
	5	T	Single molecule microscopy	21	F
April	7	TH	X-ray diffraction & scattering	22	G
	12	T	X-ray diffraction & scattering	23	G
	14	TH	Student Presentation	24	G
	19	T	Electron microscopy	25	G
	21	TH	Electron microscopy II	26	H
	26	T	Student presentation	27	H
	28	TH	Review	28	H
May	X	??	Final		

TOPICS CODE
A Macromolecules & their Environment
C Thermodynamics & Stat Mechanics
D Ultra centrifugation & gel electrophoresis
E Optical Spectroscopy-UV-Vis absorbance, IR-Raman vibrational
EF Fluorescence spectroscopy
F Optical microscopy
G X-rays and neutron diffraction ; **H** Electron Microscopy