

Chem 8510 Syllabus Fall 2014

Instructors: This class is jointly taught by all of the biophysical chemists: Professors Allison, Germann, Hamelberg, Ivanov, Laroui, Luo, Smith, and Wilson

Class Time and Location: TuTh 1:50 - 3:35 pm; Room: 311 PSC

Text: "Principles of Physical Biochemistry", 2nd Edition, van Holde, Johnson, Ho; Pearson-Prentice Hall; 2006.

Grading: Homework/class participation: 40%, Midterm Exam: 30%; Final Exam: 30%.

Homework: There will be approximately one homework assignment each class. You may consult any books, journal articles, and internet sites that you find helpful, but you may not consult with any person about the assignment until it has been submitted. Since homework is a major part of your grade, we are very serious about the requirement that it be only work that you have done on your own. There will be a 10% per day grade reduction for late homework and some homework that is discussed in class will only be accepted when it is due.

Supplementary Course Information:

Extensive and current literature references will be provided to update and support many sections of the course. There are a number of other biophysical texts in the library as well as online material and you should look over the same material as presented in these other sources.

Department of Chemistry Student Integrity Policy. All homework assignments and tests taken must represent your individual, unaided efforts. To receive unauthorized outside information or to offer unauthorized information to another student during an examination is cheating.

Any suspected offenses may be referred to the Chairman of the Department of Chemistry for appropriate action and may be further referred to the Office of the Dean of the College of Arts and Sciences.

Chem 8510 Class Schedule for Fall 2014

Date	Topic	Lecturer
August 26	Overview of Biophysical Chem - Chap. 1	Allison
August 28	Survey of Thermodynamics – Chap. 2	Allison
September 2	Macromolecular hydrodynamics - Chap. 5	Allison
September 4	Macromolecular hydrodynamics - Chap. 5	Allison
September 9	Macromolecular hydrodynamics - Chap. 5	Allison
September 11	Advanced Macromolecular hydrodynamics - Chaps. 5, 13	Allison
September 16	Electrophoresis I - Chap. 5	Allison
September 18	Electrophoresis II	Allison
September 23	Principles of macromolecular structure, Chap 3	Ivanov, Hamelberg
September 25	Principles of macromolecular structure, Chap 3	Ivanov, Hamelberg
September 30	Computational Methods - macromolecules	Ivanov, Hamelberg
October 2	Computational Methods - macromolecules	Ivanov, Hamelberg
October 7	Structural motifs, hydrophobic interactions	Luo
October 9	Macromolecular Unfolding Thermodynamics - Chap. 4	Luo
October 14	Macromolecular Unfolding Thermodynamics - Chap. 4	Luo
October 16	Midterm Exam	Allison, Ivanov, Hamelberg, Luo
October 21	Macromolecular spectroscopy, - Chapters 9 - 11	Laroui
October 23	Macromolecular spectroscopy, - Chapter s 9 - 11	Laroui
October 28	Macromolecular spectroscopy, - Chapter s 9 – 11	Smith
October 30	Macromolecular spectroscopy, - Chapter s 9 – 11	Smith
November 4	Macromolecular spectroscopy, NMR - Chapter 12	Germann
November 6	Macromolecular spectroscopy, NMR - Chapter 12	Germann
November 11	Macromolecular spectroscopy, NMR - Chapter 12	Germann
November 13	Macromolecular spectroscopy, NMR - Chapter 12	Germann
November 18	Macromolecular spectroscopy, ESR	Germann
November 20	Introduction to Macromolecular Interactions	Wilson
November 19 - 23	Thanksgiving Day (Holiday)	
December 2	Introduction to Macromolecular Interactions	Wilson
December 4	Introduction to Macromolecular Interactions	Wilson
December 9	Final Exam (1:30 to 4 PM)	All