

**BIOC 5085 BIOPHYSICAL METHODS**

Meeting times: Monday's & Friday's from 1:30-3:00  
 Wednesday's 10:45 – 12:15

Meeting Location: Biochemistry Conference Room – 421B

Course Instructor: Dr. Philip Serwer 210-567-3765 Med School Rm 416B

DAY	RM#	LECTURE	INSTRUCTOR		
<b>Probing Macromolecules</b>					
1	Monday	March 2, 2020	425D	A Biophysicists View of the World	Dr. Rui Sousa
2	Wednesday	March 4, 2020	425D	Thermodynamics: Application to Macromolecules	Dr. Rui Sousa
<b>Macromolecular Structures by Crystallography and NMR</b>					
3	Friday	March 6, 2020	425D	Introduction to Crystallography	Dr. Rui Sousa
		March 9-13, 2020		Spring Break	
4	Monday	March 16, 2020	425D	Structure Determination (General Principles)	Dr. Rui Sousa
5	Wednesday	March 18, 2020	425D	Interacting Systems-I: Surface Plasmon Resonance and Isothermal Titration Calorimetry	Dr. Eileen Lafer
6	Friday	March 20, 2020	425D	NMR Spectroscopy (General Principles)	Dr. Dmitri Ivanov
7	Monday	March 23, 2020	425D	NMR Spectroscopy (General Principles)	Dr. Dmitri Ivanov
8	Wednesday	March 25, 2020	425D	NMR Spectroscopy (Solution Structures)	Dr. Dmitri Ivanov
<b>Imaging and Spectroscopy</b>					
9	Friday	March 27, 2020	425D	UV -VIS Absorption Spectroscopy and Circular Dichroism	Dr. Philip Serwer
10	Monday	March 30, 2020	425D	Fluorescence Spectroscopy, Quenching & Lifetimes	Dr. Philip Serwer
11	Wednesday	April 1, 2020	425D	Exam 1	Dr. Philip Serwer
12	Friday	April 3, 2020	425D	FRET, single molecule fluorescence microscopy, cryo-EM	Dr. Philip Serwer
<b>Molecular Mass and Composition: Mass Spectrometry</b>					
13	Monday	April 6, 2020	425D	Introduction to Mass Spectrometry	Dr. Susan Weintraub
14	Wednesday	April 8, 2020	425D	Mass Spectrometry: Basic Principles	Dr. Susan Weintraub
15	Friday	April 10, 2020	425D	Mass Spectrometry: Applications 1	Dr. Susan Weintraub
16	Monday	April 13, 2020	425D	Mass Spectrometry: Applications 2	Dr. Susan Weintraub
17	Wednesday	April 15, 2020	425D	Quantitative Mass Spectrometry	Dr. Susan Weintraub
<b>Solution Properties of Macromolecules: Concepts in Modeling</b>					
18	Friday	April 17, 2020	425D	Macromolecular Transport Processes in Solution	Dr. Emre Brookes
19	Monday	April 20, 2020	425D	Modeling of experimental data	Dr. Emre Brookes
20	Wednesday	April 22, 2020	425D	Native Gel Electrophoresis, Excluded volume	Dr. Philip Serwer
	Friday	April 24, 2020		Battle of Flowers Holiday	
21	Monday	April 27, 2020	425D	Diffusion: Static and Dynamic Light Scattering	Dr. Emre Brookes
22	Wednesday	April 29, 2020	425D	Sedimentation: Velocity and Equilibrium	Dr. Emre Brookes
23	Friday	May 1, 2020	425D	Bead Modeling	Dr. Emre Brookes
24	Monday	May 4, 2020	425D	Small Angle X-ray and Neutron Scattering	Dr. Emre Brookes
25	Wednesday	May 6, 2020	425D	Exam II	Dr. Philip Serwer