Biochemistry & Molecular Biology Graduate Program
Structural Biology and Biophysical Chemistry
HBCG 6224, 2 Credit Hours
Term: January 6 – April 23, 2010

Class Times: Tuesday’s, 2pm – 4pm; First class is February 2.

Location: MRB 6.102

Textbook: References provided by Dr. Lee

Course Director: James C. Lee, PhD, Professor, Biochemistry and Molecular Biology, 5.138 Medical Research Building, jlee@utmb.edu, (409) 772-2281

Course Description: This course deals with the role of biophysical methods, including structural biology, solution biophysical and computational approaches, in the study of proteins in the proteomic era, particularly the mechanisms of regulation in biology. The focus is on conformational changes and macromolecular assembly, the utility of dynamic and static structural data, and the necessity to combine experimental approaches to obtain a full functional description.

Grades:

Grades will be calculated based on the performance of the following:

- Class participation (10%)
- In-class presentations and paper discussions (30%)
- Attending of seminars and meeting with speakers arranged specifically for the class (25%)
- Proposal as part of a program project grant and oral defense (35%),
- *Evaluation Form

Final course grades will be determined using the GSBS grading scale:

- 90-100 = A
- 80-89 = B
- 70-79 = C
- 69 or below = F

***Student end of course evaluations are required for all A/B/C/F-graded GSBS courses. Students are required to fill out the evaluations to receive a grade in the course. If the specified evaluation form is not received, an “I” Incomplete grade will be reported to the Office of Enrollment Services. If the course requirements are not completed within 30 days, the grade automatically converts to an “F” Failure grade. The evaluations are anonymous and will be available to course directors only after grades are assigned.

Examinations/Evaluations:

All the students will work together towards a research proposal in the format of a program project grant. The subject will be chosen by the student with prior approval by Dr. Lee. The proposal will be submitted by the students and defended orally in class at the end of the course.

Any appeals for grading changes must be submitted to Dr. Lee within 1 week after the return of the graded examination to the student. The lecturer must report changes in grades to BMB Graduate Program Office.

Excused Absences:
Since the course is highly interactive, attendance and participation are required. Students can be excused from graded assignments without penalty to their grade if an excused letter is obtained from Dr. Sarita Sastry, Director of BMB Graduate Program or Dr. Andres Oberhauser, Director of MBET Educational Track, in advance. If absences are excused, appropriate make-up work will be provided for students at the discretion of the co-directors.

**Important Dates:**

No GSBS classes  
Monday, January 18 Martin Luther King Day  
Monday, February 15 President’s Day

**Last Day to Drop/Add Course**  
Tuesday, January 22

**Course Schedule:**

There will be one meeting per week. Each meeting will be 3 hrs. The first hour of the course will be a lecture to introduce the topic to be discussed in the following week. Starting from week 2, the first 2 hours will be student-led discussion of state-of-the art articles related to the lecture of the previous week. The 3rd hour of the week will consist of lecture on topics to be discussed in the following week.

**Seminars:**

February 26, 2010  
Seminar title: “Tick-tock of a biological clock: the biochemistry of telling time”  
Andy LiWang  
Associate Professor  
School of Natural Sciences  
University of California, Merced  
Merced, CA 95343

March 29, 2010  
Seminar title: “TBD”  
Martin Egli  
Professor  
Department of Biochemistry  
Vanderbilt University  
School of Medicine  
Nashville, Tennessee 37232-0146

April 8, 2010  
Seminar title: “Tyrosine kinase signaling is complex and time consuming”  
John E. Ladbury  
Edward Rotan Distinguished Professor in Cancer Research  
Department of Biochemistry & Molecular Biology  
M. D. Anderson Cancer Center  
Houston, Texas, 77030