

BCHS 6229: Protein Structure and Function - Fall 2011

Class Meetings: Tuesday and Thursday, 1:00-3:00 PM, HSC402B

Instructor: Hye-Jeong YEO, Ph.D. (HSC 448, hyeo@uh.edu)

Lecture notes: http://www.bchs.uh.edu/~yeo/lecture_bchs6229.html

Overview

The main goals of this course are as follows:

- Carry out a rapid review of the essentials of protein structure & function
- Provide a basis for evaluating current structural biology literature
- Cover selected important topics in protein science (literature based as much as possible)

There are no required textbooks. However, the following books may be useful for parts of the course, and are available from (online) booksellers:

Introduction to Protein Structure, 2nd Ed., Branden and Tooze, 1999

Protein Structure and Function, Petsko and Ringe, 2004

Fundamentals of Biochemistry, Voet, 2ndEd, 2005

Evaluation: One short in-class exam (**20 %**)
 Two homework assignments (**40 %**)
 One final project investigating and presenting a structural topic (**40 %**)

Date	Subject	Meeting #
10/11/11	Introduction – Basic Structural Principles	1
10/13/11	Protein Architecture: Primary, Secondary, & Tertiary Structure	2
10/18/11	Protein Folding: Forces, Mechanisms, & Characterization	3
10/20/11	From Structure to Function (I): Flexibility and Protein Function	4
10/25/11	From Structure to Function (II): Dissecting enzyme mechanisms	5
10/27/11	From Sequence to Function (I): Protein Profiling	6
11/01/11	From Sequence to Function (II): Structural Biology Knowledgebase	7
11/03/11	Methods for Protein Structure-Function studies (I)	8
11/08/11	Methods for Protein Structure-Function studies (II)	9
11/10/11	Protein Science: New directions	10
11/15/11	Exam / Special Topics I	11
11/17/11	Special Topics II	12
11/24/11	Thanksgiving – No class	
11/29/11	Special Topics III	13
12/01/11	Special Topics IV	14

Note: Topics are subject to change and will announced during the class.