

BIOCHEMISTRY-PROTEINS
CHEM 3811-1
FALL 2019

Instructor: Dr. Martin Margittai

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Text: Lehninger Principles of Biochemistry, Seventh Edition, Nelson and Cox, Freeman and Company, 2017

Lectures: 11-11:50 am, MWF, Engineering & Computer Science 401

Office Hours: Tuesdays and Thursdays 3:00-4:00 pm, or by appointment.

Homework: Homework will be given out occasionally. These assignments will not be graded. However, it is highly recommended to work through the problems as similar ones may appear in the exams.

Exams: There are two 1-hour midterm exams during the quarter, plus a 2-hour cumulative final exam. Each exam is worth 100 points. Exam questions will be non-multiple choice.

If you miss a 1-hour midterm exam, then your final exam will be counted twice and replace the missed midterm exam. With one exception, **THERE WILL BE NO MAKEUP EXAMS**. The only exception to the no-makeup policy will be for members of a university team or group, e.g. athletic team or music group scheduled to be away from campus at the time of the exam. You must inform your instructor of this prior to the exam and make arrangements at that time for a makeup exam.

Quizzes: There will be 7 quizzes. Each quiz will cover the material of the preceding week and be worth 20 points.

Group assignments: There will be 3 in-class group assignments. These assignments are worth 20 points each.

Grading:	midterm exams	200 points
	final exam	100 points
	quizzes	140 points
	group assignments	60 points

Extra credit: Attend Marsico seminar on September 19, 4:00 pm in Olin 205 10 points

Dates	Topics Covered	Reading Chapters
09/09/19	Biochemistry Foundations 1	1
09/11/19	Biochemistry Foundations 2	1
09/13/19	Water: Weak Interactions and Solvation	2
09/16/19	Water: Weak Acids and Bases Quiz	2
09/18/19	Water: Buffers and Hydrolysis	2
09/19/19	Extra Credit: Marsico Seminar, 4:00-5:00 pm in Olin 205	
09/20/19	Marsico Scholar: Prof. Joseph Cotruvo from Penn State	
09/23/19	Amino Acids Quiz	3
09/25/19	Protein Primary Structure	3
09/27/19	Protein Purification	3
09/30/19	Protein Sequencing and Synthesis Quiz	4
10/02/19	Overview of Protein Structure	4
10/04/19	Secondary Structure Group Assignment	4
10/04/19	Review Session. 4:00-5:00 pm in Olin 205	
10/07/19	Exam 1	
10/09/19	Tertiary Structure	4
10/11/19	Tertiary Structure/ Quaternary Structure	4
10/14/19	Protein Denaturation and Folding Quiz	4
10/16/19	Assisted Protein Folding	4
10/18/19	Assisted Protein Folding and Degradation	4
10/21/19	Protein Dynamics, Misfolding, and Disease Quiz	5
10/23/19	Protein Function: Myoglobin	5
10/25/19	Protein Function: Hemoglobin	5
10/28/19	Protein Function: Immune System Quiz	5
10/30/19	Protein Function: Actin, Myosin	
11/01/19	How Enzymes Work Group Assignment	6
11/01/19	Review Session. 4:00-5:00 pm in Olin 205	
11/04/19	Exam 2	
11/06/19	Enzyme Kinetics 1	6
11/08/19	Enzyme Kinetics 2	6
11/11/19	Enzymatic Reactions 1 Quiz	6
11/13/19	Enzymatic Reactions 2	6
11/15/19	Regulatory Enzymes Group Assignment	6
11/15/19	Review Session. 4:00-5:00 pm in Olin 205	
11/19/19	Final Exam (comprehensive), 10:00 am – 11:50 am, Engineering & Computer Science 401	