

CHEM 3811 Fall 2017
TENTATIVE SYLLABUS (rev 1)
BIOCHEMISTRY 1 - PROTEINS
Lectures: 11-11:50 am, MWF BAUD 102

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Text: Donald Voet, Judith G. Voet, *Biochemistry, 4th Edition* December 2010, ©2011

Office Hours 229 Seely G. Mudd: Every morning (except Thursdays) from 8:30/9:00– 10:45AM, MW 12/1:00-1:45, 4-5PM by appointment only, You are invited to sign up for 20 minute slots on bit.ly/1UnHyz4

Lectures: The Powerpoint lectures are intended to *complement and supplement* the textbook, which is sometimes too brief or incomplete on some topics. There are occasional handouts in class and some exercises worked out on the white board. While Powerpoint lectures are posted in advance, they are sometimes revised to reflect any clarification from the lecture session; the final version would be posted within 2 hours after class. Check Canvas daily for announcements, schedule revisions, etc.

Homework: You should try the homework in the book on your own. There will be some 'assigned' ungraded problems; a solutions key will be on Canvas. It is highly recommended to work through these as similar problems 'might' appear in the exams.

Exams: There are two 50-60 min. midterm exams, one 40 minute amino acid quiz, and a 2-hour cumulative final exam. Each MQ exam is worth 100 points. Exam questions will be multiple choice, some fill-in and one or two essay questions. While some of the questions are rote memorization, several reflect real research scenarios that require understanding examples of each technique, synthesis, phenomenon discussed in class. Each exam will contain one or two challenging questions (worth about 20pts) that require piecing together several concepts and logic steps. (We can alter the MQ dates if the majority of the class have other exams that day).

THERE WILL BE NO MAKEUP EXAMS. The only exception 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 at least one week prior to the exam.

Grading

Two MQ exams:	200
Quiz	50
Final Exam	200
Total	450pts

The assignment of a letter grade to a given numerical grade will depend on the overall class performance and DU standards. However, if everybody does well, grades will not be curved down. The course is graded on the curve, not the absolute scale. Do not pay attention to the letter grade that Canvas sometimes prints

If you take both midterm exams and your grade on the final exam is much better than your midterm exam grades, in some cases your final grade may be 'adjusted up' in assessing your overall performance.

Students with Disabilities/Medical Issues

University of Denver complies with the American with Disabilities Act and Section 504 of the Rehabilitation Act. Any student who feels s/he may need an accommodation based on the impact of a disability should contact me privately to discuss your specific needs and what we can do jointly to accommodate them. If you qualify for academic accommodations because of a disability or medical issue please submit a Faculty Letter to me from Disability Services Program (DSP) in a timely manner so that your needs may be addressed. Disability Services determines accommodations based on documented disabilities/medical issues. Please contact the Disability Services Program located on the 4th floor of Ruffatto Hall; 1999 E. Evans Ave., to coordinate reasonable accommodations for students with documented disabilities/medical issues. 303.871/2278/7432/ 2455. Information is also available on line at <http://www.du.edu/disability/dsp>; see the Handbook for Students with Disabilities.

There are other resources available on campus to help students with their learning and study needs. The Learning Effectiveness Program (LEP), a fee based program that offers support services to DU students with LD and/or ADHD, which provides academic counseling, tutoring and other specialist services (<http://www.du.edu/disability/lep>, 4th floor of Ruffatto Hall, 303.871.2372). The Writing Center supports and promotes effective student writing helping with all kinds of writing projects: class assignments, personal writing, professional writing, and multimedia projects. They serve any student affiliated with the University and invite students in all classes, at all levels of writing ability, and at any stage of the writing process to visit us. To Schedule an Appointment: <http://myweb.du.edu>, Student & Financial Aid tab, Writing Center, 303.871.7456. They are located in the AAC and offer evening and weekend hours. The Career Center partners with faculty, staff, senior administration and employers, to help students and alumni make informed decisions about work and life. They offer self assessment, career and educational options, self marketing strategies and real world experiences and can be contacted at <http://www.du.edu/studentlife/career>, 303.871.2150 and are located in the basement of the Driscoll Center. The Math and Science Help Center is also in the AAC and offer evening and weekend hours..

Religious Accommodations

University policy grants students excused absences from class or other organized activities for observance of religious holy days, unless the accommodation would create an undue hardship. Faculty are asked to be responsive to requests when students contact them IN ADVANCE to request such an excused absence. Students are responsible for completing assignments given during their absence, but should be given an opportunity to make up work missed because of religious observance.

Once a student has registered for a class, the student is expected to examine the course syllabus for potential conflicts with holy days and to notify the instructor by the end of the first week of classes of any conflicts that may require an absence (including any required additional preparation/travel time). The student is also expected to remind the faculty member in advance of the missed class, and to make arrangements in advance (with the faculty member) to make up any missed work or in-class material within a reasonable amount of time.

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TENTATIVE LECTURE, READING AND HW SCHEDULE (rev 1)
 (note: the corresponding Powerpoint lecture file is on Canvas)

Dates	Topics Covered	Chap	HW
09/11/15	Course details, introduction , why study biochemistry?	1	TBA
09/13/15	Water . Weak Interactions and Solvation	2	TBA
09/15/15	Water: Weak Acids and Bases Buffers and Hydrolysis	2	
09/18/15	Thermodynamic Principles: A Review	3	TBA
09/20/15	Amino Acids (including handout)	4	TBA
09/22/15	Protein <i>Primary Structure</i> Protein Purification	4	
09/25/15	Protein Synthesis	6	TBA
09/27/15	Protein Sequencing Mass Spectral Methods for Sequencing	6	
09/29/15	Amino acid quiz (40 min.)		
10/02/15	Sequence Analysis	6	
10/04/15	Overview of Protein Structure; Primary Structure	7	TBA
10/06/15	Secondary Structure	7-8	TBA
10/09/15	Secondary Structure	7-8	
10/11/15	Tertiary Structure	7-8	
10/13/15	MQ Exam 1		
10/16/15	2d and 3d Structure Determination Methods	8	TBA
10/18/15	Methods of Structure Determination	8	
10/20/15	Protein Denaturation and Folding	9	TBA
10/23/15	Assisted Protein Folding and Degradation	9	
10/25/15	Protein Dynamics, Misfolding and Disease	9	
10/27/15	Protein Function: Myoglobin Hemoglobin	10	TBA
10/30/15	How Enzymes Work	13	TBA
11/01/15	Enzyme Kinetics 1	14	TBA
11/03/15	Enzyme Kinetics 2	14	
11/06/15	Enzyme Inhibition	14	
11/08/15	Enzyme Inhibition	14	
11/10/15	MQ Exam 2 (or following Monday)		
11/13/15	Enzymatic Reactions 1	15	TBA
11/15/15	Enzymatic Reactions 2	15	
11/17/17	Regulatory Enzymes	15	
11/19/15	Final Exam (comprehensive), 10:00 am – 11:50 am,		Sunday final; BAUD102