

BCMB 351: Biochemistry I
Lecture: Tue and Thurs 8:35-9:50 am
Lab: Tu or We 1:30-4:20pm
Ursinus College Syllabus: Fall 2007

Instructor: Amy Brown, Ph.D.

Office: Pfahler 313 D

Office phone: x2383 Cell phone: (484) 995-7706

Email: abrown@ursinus.edu

Textbook: Biochemistry, 6th edition, by Berg, Tymoczko, and Stryer.

Office Hours: W noon-12:30pm, Tu/Th 11am-12:30pm, and by appointment.

Course objectives/learning outcomes.

After successful completion of this course, students will be able to:

1. Understand the fundamentals of biochemistry as it relates to proteins.
2. Use the fundamental principles of biochemistry in biological applications.
3. Communicate scientific knowledge in oral and written format.
4. Work effectively in groups.
5. Enjoy biochemistry!
6. Demonstrate honesty and respect in all situations.

Your grade will be comprised of the following: 3 exams 10% each; homework 8%, paper presentation 10%; poster 5%; final exam 15%; 4 lab reports 6.5% each; class participation 6%. Grades will be assigned according to the following numerical system: A+ = [97,100], A = [93,97), A- = [90,93), B+ = [87,90), B = [83,87), B- = [80,83), C+ = [77,80), C = [73,77), C- = [70,73), D+ = [67,70), D = [63,67), D- = [60,63), F = [0,60).

The only acceptable reason for missing a graded assignment is emergency hospitalization, which must be documented with a doctor's note. No make-ups will be given for any graded assignment for any reason. No graded assignments will be accepted late under any circumstances. Students are responsible for all work missed due to absence and must have all assignments turned in on time (or early) regardless of attendance in class.

Academic integrity: Please read the section in the handbook regarding academic integrity. At the minimum, any academic dishonesty will result in failure of the assignment and referral to the dean of the college. Academic dishonesty includes, but is not limited to: copying answers during a quiz or exam, plagiarism, or representing the work of another person as your own.

Attendance: It is vitally important for you to **attend every single class**. First, class participation is 6% of your grade. Second, graded assignments may be given at any time (even without notice). If you are not in class for any reason, and miss a graded assignment, you will receive a grade of zero for it. Third, the only way to fully appreciate and learn the material is to attend every class. If you need to miss a lab, prior notice **must** be given.

<u>Date</u>	<u>Sections Covered This Day</u>
T 8/28	Water Handout
H 8/30	2.1-2.2
T 9/4	2.3-2.5
H 9/6	2.6 and 3.1
T 9/11	Review
H 9/13	Exam
T 9/18	3.2-3.3
H 9/20	Paper Presentations
T 9/25	3.4-3.6
H 9/27	6.1-6.2
T 10/2	6.3-6.5
H 10/4	Review
T 10/9	Exam
H 10/11	8.1-8.3
T 10/16	Fall Break
H 10/18	Paper Presentations
T 10/23	8.4
H 10/25	8.5
T 10/30	9.1-9.2
H 11/1	9.3-9.4
T 11/6	4.1 and 3.4
H 11/8	Review
T 11/13	Exam
H 11/15	30.1-30.2
T 11/20	Paper Presentations
H 11/22	Thanksgiving
T 11/27	30.3-30.4
H 11/29	30.5-30.7
T 12/4	Poster Presentations
H 12/6	Review
Final Exam: Saturday 12/15 1pm – 4 pm	

Note: T = Tuesday and H = Thursday

Paper Presentation

Groups of three people each will choose a topic from the following list: amyloid fibers (Alzheimer's disease), prions (Mad Cow disease), desmin (cardiac myopathy), CKMM (muscle-specific creatine kinase), caspases (apoptosis), peptzymes, antigenases (catalytic antibodies), and telomerase (catalytic RNA). I suggest that you search the JSTOR database, using the topic of choice, and select one journal article from the *Proceedings of the National Academy of the Sciences*. Try to choose an article that is interesting to you and is less than 10 pages in length. Once you have chosen an article, please send me the citation no later than 9/11 so that I can approve it. I will then post the papers on Blackboard in order for everyone to access them and read them prior to the presentations. A successful presentation will include a formal PowerPoint presentation, using clear and effective visual aids to convey the focus of the article. The main point of the paper presentation is for you to learn how to read and dissect a journal article. Presentations must be between 20-25 minutes in length. There should also be significant discussion with the class so think of some ways to encourage this (for example, you might hand out thought questions before class or bring in data from additional papers to explore with the group). It is in your best interest to work with your partners so that the entire presentation/discussion goes smoothly.

Poster Assignment:

An in-class poster presentation will occur on December 4th. The topic for the poster will be "Pick a Drug". Each individual will generate and present a poster. You will pick a specific drug or class of drugs, either legal pharmaceuticals or illicit drugs, and communicate to your peers via the poster the biochemical mode of action of the drug. This poster should include the relevancy of the drug, mechanism of action of the drug and any target enzymes, efficacy of the drug, side effects of the drug and their possible origin, etc. The poster should also include some aspect of the economic impact of the drug on society (either US or worldwide). The poster should be of standard size. You should be prepared to bring people through your poster and to answer questions. Posters will be graded on their clarity, informational content, delivery, readability, and responses to questions. As such, everyone is expected to participate in the session and posters will remain available after the session for people to review. The poster topic is due **in writing or by e-mail to me** on October 11 (8:35 a.m.).