

Course Syllabus
Biochemistry Lab/CHEM 4121
Spring 2016

Instructor:	Lori Isom	Office Hours:
Office:	201D, Laney-Manion	W, F 8:45-10:00am
Phone:	450-5794	T, R 9:15-10:00am
Email:	lorii@uca.edu	
Web Site:	http://faculty.uca.edu/lorii/home.html	
Class Time:	M 1:00 - 5:00 Room 302 Laney-Manion Hall	

Course Description and Objectives:

This course is designed to be an overview of important biochemical techniques and concepts. The laboratory experiments are designed to integrate relevant laboratory techniques with current issues in the field of biochemistry such as cloning and epidemiology. The majority of this course will involve computational analysis of crystallographic structures, literature analysis, and genomic structure tool utilization. The course will also help to develop important data presentation and lecture skills relevant to the graduating scientist.

Prerequisites:

Each student is required to have an **e-mail address, access to the internet and access to a windows-based computer onto which you have permission to download a program. Students are responsible for checking their email often.** I may send announcements and assignments via email. Email may be used quite extensively to transmit information concerning assignments to the students. Each student must also 1) have access to a PC computer to run the computational software, and 2) accept the invitation and have access to the shared DropBox folder that I will provide. A flash drive will also be useful.

The prerequisite course for this class is successful completion of Chem 3411 (and thus Chemistry 1450, 1451, 2410) and Chem 4320 as a pre- or corequisite.

Class Attendance

Class attendance is strongly recommended. Those students who attend class regularly are the most likely to succeed in this course. Each lab missed without an excuse validated by the instructor will result in a 5% penalty and the lecture total will be reduced accordingly. Any student who is absent from class for 2 class meetings may be dropped from the course with a WF.

Make-up Policy

Make-up labs will be allowed **only** under rare circumstances. If you must miss a lab for an unavoidable, significant and validated reason, contact me by email or phone (leave a message) **BEFORE** the time of the scheduled lab.

Course Assignments (each category could include some or all assignments described below)

A) Protein Project

The analysis of macromolecular biochemical structures involves many aspects of biochemical research that are computationally based. Students will be assigned a protein whose structure they will analyze throughout the semester. This project will **require** access to a windows-based computer, downloading the programs RasMol and perhaps Chime and Netscape and access to Microsoft Excel, Powerpoint and Word.

All students will be required to complete assignments on time and should prepare for potential, unavoidable issues involving online resources (such as websites and databases unavailable, software not running properly on your specific computer) by allowing time for the issues to resolve and/or to check out a departmental laptop (for use in Laney-Manion Hall only).

Topics covered include:

X-ray Crystallographic Experiment and Data
Structural and Literature Databases
Structural Coordinate Visualization
Protein Structural Investigation Introduction
Structural Detail: Relating Experimental Data to Literature
Comparing Structures: PDB Structural Tools
Comprehensive Protein Structure Analysis

B) House/Walking Dead Presentations

During the semester, groups will select an episode of House or the Walking Dead that we will view and lead a discussion and find a related paper from a primary literature source and present a synopsis of the paper to the class. Students must have access to the episode of House they wish to show the class either on DVD or through some online service. **Each member of the group will be responsible for presenting sufficient information of appropriate depth and each student will be graded independently on their contribution to the presentation as well as the presentation as a whole.**

Class Communications

Students are required to obtain all information missed from class absences from their peers. It is a very good idea to have a classmate record a lecture that you know you will miss. Once notes and/or lecture recording(s) have been obtained and reviewed, students should come to my office during office hours to clarify any confusion about the missed material.

If a texting app service is used for the class, class announcements may be sent out by email and/or text. Students should check their UCA email account regularly for class information/reminders.

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I will check my UCA email regularly during working hours during the regular semester when the University is open, ~8am-5pm, M-F. I cannot respond to inquiries that require in depth explanations or instruction. Students should come to my office hours for such information. Students should not expect instant (especially last minute) or continuous access via email.

Course Evaluations

Student evaluations of a course and its professor are a crucial element in helping faculty achieve excellence in the classroom and the institution in demonstrating that students

are gaining knowledge. Students may evaluate courses they are taking starting on the Monday of the twelfth week of instruction through the end of finals week by logging in to myUCA and clicking on the Evals button on the top right.

Academic Dishonesty

The penalties for cheating (ie. representing someone else's work as your own) are SEVERE!! Penalties include, but are not limited to, assigning an "F" for the work and/or the course to expulsion from the University.

The University of Central Arkansas affirms its commitment to academic integrity and expects all members of the university community to accept shared responsibility for maintaining academic integrity. Students in this course are subject to the provisions of the University's Academic Integrity Policy, approved by the Board of Trustees as Board Policy No. 709 on February 10, 2010, and published in the Student Handbook. Penalties for academic misconduct in this course may include a failing grade on an assignment, a failing grade in the course, or any other course-related sanction the instructor determines to be appropriate. Continued enrollment in this course affirms a student's acceptance of this university policy.

Most assignments are submitted electronically via deposition in your designated dropbox folder. The assignment must be placed in your "Assignments_due" folder before the time established as the due date/time. It must be named as described below. You must not change your submitted file after this due date/time. Changing a submitted assignment after the designated due date/time is cheating and will be treated as such.

Grading

The following is a **tentative** description of the assignments included in this class. Specific numbers may be changed if deemed necessary.

The following grading scale and assessments may be altered at any time by the instructor as seen fit and appropriate for a given class. The scale reflects a maximum and will not be increased. For instance, a student whose average at the end of the semester is 94% is guaranteed an A. This threshold will not be raised, it may however be lowered at the instructor's discretion.

Optional assignments are included at the discretion of the instructor and therefore a range of potential points is listed. If assigned, the points will be included in grade calculation and are not optional.

If a student decides to drop a class, this decision is solely the responsibility of the student and should be made understanding the grade calculation methods explained and the instructor's right to adjust these when grades are assigned.

If a student misses lab without an excuse the instructor deems valid, a 5% penalty will be applied to the total points earned in the course before the final grade is calculated.

Late work will only be accepted under exceptional circumstances as defined by the instructor. If late work is accepted, an appropriate late penalty will most likely be applied. No assignments will be accepted after final grades are submitted (except under exceptional circumstances defined by the instructor)

All assignments must be **IN YOUR DROPBOX** folder before the beginning of lab on the day the assignment is due. While email correspondence may be a part of some assignments, final assignments should never be turned in to me by email. Again, assignments must be placed in your designated dropbox folder before the beginning of lab on the due date.

After assignments are submitted for grading, the files should **NEVER** be overwritten by subsequent assignment files. All assignments are to remain unaltered from their submitted form in your Assignments_due folder for the duration of the semester. To prevent confusion and unintentional overwriting, each assignment submitted should be named with a unique name including the due date. For instance if I was submitting a powerpoint file with my protein introduction slides, I would name it **Protein_intro_Isom_mmddyy.ppt** This file should NOT be overwritten by subsequent submissions

Grading

The following is a tentative description of the assignments included in this class. Specific numbers may be changed if deemed necessary.

Protein Project	200 points
House Presentation	100 points
In-class Practical Assessment	0-100 points
Participation	0-50 points
Other	0-50 points

Total 300-500 points

Tentative Scale (subject to change):

A = 94% +
B = 85 – 93%
C = 75 – 84%
D = 65 – 74%
F = < 64%

Important Dates

Jan 13th, last day to register or add a class
Mar 18th, last day to drop with a “W”
Apr 15th, last day to drop with “WP”

Drop policy

The last day to drop with a “W” is March 18th. If a student drops on or before this date, a “W” is assigned regardless of the student’s grade in the course. Students may officially drop the course until April 15th, ***however, the grade assigned March 18th will depend on the student’s grade status in the course at the time of the withdraw.*** For example, if the student withdraws from the course on March 19th and at that time has earned a “C” or better in the course up to that point, a grade of “WP” will be assigned. If, however, the student’s grade is below a “C” at the time of withdraw (after March 18th but on or before April 15th) then a grade of “WF” will be assigned at the discretion of the instructor. Again, the grade assigned at this point is at the sole discretion of the instructor. ***This designation is punitive and will negatively affect your grade point average!***

Students not attending class for whatever reason for more than four class periods may be dropped from the course by the instructor, at the instructor’s discretion.

Disability Disclosure

The University of Central Arkansas adheres to the requirements of the Americans with Disabilities Act. If you need an accommodation under this Act due to a disability, contact the UCA Disability Resource Center at 450-3613.

Students enrolled in this course who have a medically validated reason and a letter from DSS will be required to take assessments in a location determined by the instructor that provides for the allowances stated from DSS. Any other requests, not specifically provided for in the accommodation letter from DSS, will be considered and up to the sole discretion of the instructor.

Emergency Procedures Summary

An Emergency Procedures Summary (EPS) for the building in which this class is held will be discussed during the first week of this course. EPS documents for most buildings on campus are available at <http://uca.edu/mysafety/bep/>. Every student should be familiar with emergency procedures for any campus building in which he/she spends time for classes or other purposes.

Title IX Disclosure:

If a student discloses an act of sexual harassment, discrimination, assault, or other sexual misconduct to a faculty member (as it relates to “student-on-student” or “employee-on-student”), the faculty member cannot maintain complete confidentiality and is required to report the act and may be required to reveal the names of the parties involved. Any allegations made by a student may or may not trigger an investigation. Each situation differs, and the obligation to conduct an investigation will depend on the specific set of circumstances. The determination to conduct an investigation will be made by the Title IX Coordinator. For further information, please visit: <https://uca.edu/titleix>. **Disclosure of sexual misconduct by a third party who is not a student and/or employee is also required if the misconduct occurs when the third party is a participant in a university-sponsored program, event, or activity.*

Student Handbook Policies

You should familiarize yourself with the policies listed in the most recent UCA student handbook (available UCA’s website), especially those related to academics and the sexual harassment policy.

Stuff I shouldn't have to say.... But do.

- 1) I cannot discuss grades by phone or email. I do not make appointments by phone.
- 2) If you do not have another class during my office hours or another pressing and valid reason, you cannot make an appointment to meet with me outside of my office hours. Just so you know... not wanting to get up early enough to come to my office hours is not a valid reason.
- 3) I will not discuss grades during the last week of the semester. The end of the semester is not the time to be concerned about your grade in the course, unless there are sufficient extenuating circumstances (I determine what those are... and just wanting to know isn't a good reason), I will not make appointments or meet with students dropping by to discuss their grade in the course
- 4) Students will not be allowed to select the color of the paper, the font, or font size of the exams or other assessment/assignment materials regardless of whether other instructors have provided such accommodation in the past for the student without a validated DSS accommodation requiring the requested action
- 5) Late work will almost certainly not be accepted because of some unexpected computational or mechanical failure. Be responsible enough to get the assignment in on the time/date it is due. Procrastination is directly correlated with the excuses given above. Don't do it.
- 6) If you choose to drop the course, the decision is yours. No one else's. I reserve the right to adjust grades/assignments as I deem warranted for a given class after you make your decision.
- 7) If you miss class, I will not provide make up lecture for you on the material. If you have to miss class, you should try to have someone record lecture for you and get at least two people's notes over the material you missed. You should use these to get up to speed as quickly as possible once you return... After you have done these things, please come to me if you have specific questions about the material you missed.
- 8) I don't give extra credit. There are plenty of opportunities for credit during the semester.
- 9) You must submit assignments in the manner requested and follow all directions concerning those assignments/exams or you may lose significant points. Unless specifically stated, assignments/projects **cannot** be emailed electronically and even those allowing electronic submission will most likely require a hard copy to be submitted as well.
- 10) If you don't follow directions and select a topic/drug in a timely manner (ranging from 1-2 weeks before assignment/presentation is due, depending on the assignment), one will not be assigned to you and you will forfeit points for the resulting/related assignment. Except under extenuating circumstances, topics will not be approved via email.

11) If you need to miss a class, it is your responsibility to obtain the missed information and you will forfeit any assignments and their corresponding points collected during that absence. I will not explain what you missed during class by email. The best method for obtaining information if you have to miss class is to have someone record lecture and take notes for you. You should never rely on one person's notes, however, since different people include different information in notes.

Tentative Class Schedule

all dates and content are subject to change!

Date	Lab
Jan 11	Introduction/Sign up
Jan 18	No Lab (MLK Day)
Jan 25	Protein and Database Introduction
Feb 1	Structure Analysis and Database Intro
Feb 8	House/WD Presentations (groups 1&2)
Feb 15	Protein Analysis, session 1
Feb 22	Protein Analysis, session 2
Feb 29	House/WD Presentations (groups 3&4)
Mar 7	Protein Analysis, session 3
Mar 14	Protein Analysis, session 4
Mar 21-25	Spring Break
Mar 28	House/WD Presentations (groups 5&6)
Apr 4	Movie: Contagion or Protein Analysis, session 5
Apr 11	Eliza or Protein Analysis, session 5
Apr 18	No Lab