

# CHM4930 – Advanced Biochemistry

## Instructor

Dr. Alix Rexford

LEI302

[Alix.rexford@chem.ufl.edu](mailto:Alix.rexford@chem.ufl.edu)

## Office Hours

Mon 12:00 – 2:00 pm (Zoom)

Tues 10:30 – 11:30 am (LEI302)

Fri 12:00 – 2:00 pm (Zoom)

## Learning Assistants

Bella Cherin

Kartik Nagaraj

## Recommended Texts

Lehninger Principles of Biochemistry

Garrett & Grisham Biochemistry

AK Lectures

## Prerequisites

CHM 3218 (C) or permission of the instructor.

## Course Objectives

This course is a continuation of CHM3218, intended for major and preprofessional students. Introduces the basic concepts of biochemistry and molecular biology from the structural and mechanistic perspective of organic chemistry.

## Class Meetings

Class meets on Tuesday 8:30 – 10:25 AM (periods 2-3) and Thursday 9:35 – 10:25 AM (period 3) in LEI 142. Attendance and participation is required.

Each class will consist of a combination of lecture, small group discussions, and various activities. The goal of these activities and discussion sessions is for students to learn how to apply your newly acquired knowledge to develop a deep understanding of essential concepts in biochemistry.

## Grading

The final course grade will be based upon pre-lecture assignments, active participation during class, literature assignments, and three module packets. All assignments should be uploaded to Canvas. If using paper & pen, you are required to SCAN your documents and upload a single PDF. Photos will not be graded and given a grade of 0. If your handwriting is poor, you will be asked to type up written assignments. Failure to do so may result in a grade of 0 if your handwriting cannot be read.

**Post-lecture assignments (PLAs)** will be available on Canvas at least one week before they are due and will questions related to the previous week's lectures (*recap* and *dig a little deeper*) as well as primer questions for the upcoming week's lectures (*looking forward*). *Recap* and *looking forward* questions are graded PASS/FAIL for completeness (5 pts). These questions come directly from your notes of this course or the previous course in the series. *Dig a little deeper* questions require additional research on your part and one randomly selected question will be graded for correctness (5 pts).

Students are expected to actively participate in daily small group discussions. Your participation in the group as a whole and performance in your group role will be evaluated by the instructor and your group mates to determine your participation score. Participation in the main group (including asking/answering questions and presenting group discussions) will also contribute to your overall participation score.

The course material is broken into three modules. Each module will have two or more assignments or class activities that will count towards the module packet score in addition to a 2-hour exam. All exams and assignments are open resource. An optional comprehensive final exam can take the place of the lowest exam score. Assignment due dates can be found on the Canvas course page.

### **Module 1: Energy storage, metabolism, & regulation**

**January 14 – January 30**

**Take-home exam: February 5**

### **Module 2: Lipids & Cell Signaling**

**January 30 – February 27**

**Take-home exam: March 5**

### **Module 3: Protein & Nucleotide metabolism**

**March 4 – April 3**

**In class exam: March 25**

**Literature presentations: April 8 – April 22**

\*dates are subject to change.

<i>Assignment</i>	<i>Points (1000 pts possible)</i>
Post-lecture assignment	100 (10 pts each)
Module 1	180
Module 2	180
Module 3	180
Literature assignments	260
Participation	100

\*Optional: Final exam (180 pts) can take the place of one (1) module score

Letter grades will be assigned based on the highest letter grade earned from the table below:

Total points	Grade	Total points	Grade
> 930	A	780 – 799.9	C+
900 – 929.9	A-	730 – 779.9	C
880 – 899.9	B+	700 – 729.9	C-
830 – 879.9	B	600 – 699.9	D
800 – 829.9	B-	< 600	E

### **Makeup Policy**

No makeup assignments or exams will be given.

If an exam or assignment will be missed due to active military duty, religious holy days, or official University activities, the student is required to provide documentation of such absences at least **two weeks in advance** to

schedule an early exam in advance of the regularly scheduled exam. Assignments that are missed due to pre-excused absences will not be counted against the student in the final grade.

### Regrades and Grading Errors

Mistakes happen and grading errors can be especially frustrating. I will do my best to make sure that you are always kept up to date with your performance in the course and post your grades in a timely manner. It is ***your responsibility*** to make sure that your grade on Canvas reflects the scores you receive on assignments and bring it to my attention ASAP when you notice a discrepancy. If you feel that a grading error was made on a particular assignment you have **one week from the date the grade was posted to Canvas** to request a regrade. Regrades will include a rescore of the entire assignment and may result in a lower score. To request a regrade you should post a comment on the assignment in Canvas including the question that was graded incorrectly and **why you think your answer is correct**.

### Privacy Statement

Our class sessions will be audio visually recorded for students in the class to refer back. Students who participate with their camera engaged or utilize a profile image are agreeing to have their video or image recorded. If you are unwilling to consent to have your profile or video image recorded, be sure to keep your camera off and do not use a profile image. Likewise, students who un-mute during class and participate orally are agreeing to have their voices recorded. If you are not willing to consent to have your voice recorded during class, you will need to keep your mute button activated and communicate exclusively using the "chat" feature, which allows students to type questions and comments live. The chat will not be recorded or shared. As in all courses, unauthorized recording and unauthorized sharing of recorded materials is prohibited. Recordings will not normally be made during breakout sessions, however those that are made are for the sole use of the instructor and will not be made available to students or others.

### Lecture Schedule

A tentative schedule of lectures is available at the course e-Learning site

### Study Methods

Students should be keeping up with suggested readings/videos each day for each day of class. Typical study time to be successful in a course is ~2-3 hours outside of the classroom per hour in the classroom, although some students may require more while others require less. This class meets 3 hours per week, so you should be able to dedicate ~8 hours per week outside of class meetings to this course. I will be posting recordings of each day's lectures and the lecture slides that are created during lecture to the Canvas site. After reviewing lecture notes **post-lecture assignments should take about 2-3 hours**.

If you are spending considerably more time on PLAs you need to ***evaluate your study habits*** to be more effective. Try taking notes during your pre-class reading/videos and make sure that you are seeing the big picture and not getting bogged down in the details. You can make bullet points of the key concepts and check that you are on the right track using the PLAs as a guide. Notes should not be copied directly from the text or video, but should be re-stated in your own words, and again, condensed to only include key concepts.

There is no required textbook, but I would recommend finding ANY college biochemistry textbook as those will have additional conceptual questions at the end of each chapter. PLAs and small group session assignments will be the only practice problems that I will assign. ***Module packet assignments*** will be open response questions that are similar in scope to small group session assignments and the review questions in the PLAs.

### Academic Honesty

We, the members of the University of Florida community, pledge to hold ourselves and our peers to the highest standards of honesty and integrity. On all work submitted for credit by students at the University of Florida, the

following pledge is either required or implied: “On my honor, I have neither given nor received unauthorized aid in doing this assignment.”

Use of websites such as Chegg and CourseHero, among others, to complete graded assignments is in violation of both the University honor code and the websites’ code of conduct and students who use such unauthorized resources will be investigated and earn a grade of zero for the assignment.

A note about online resources: There are dozens, if not hundreds, of really great resources that you can use to improve your understanding of the subject matter. In fact, I include AK lecture’s YouTube series as recommended viewing for students who would prefer videos over reading textbooks. A good resource is one that helps you to think through a problem, not just shows you the answer. A good tutor will never tell you the answer, they will *lead you to the answer*.

### **Course Evaluation**

Students are expected to provide professional and respectful feedback on the quality of instruction in this course by completing course evaluations online via GatorEvals. Guidance on how to give feedback in a professional and respectful manner is available at <https://gatorevals.aa.ufl.edu/students/>. Students will be notified when the evaluation period opens and can complete evaluations through the email they receive from GatorEvals, in their Canvas course menu under GatorEvals, or via <https://ufl.bluera.com/ufl/>. Summaries of course evaluation results are available to students at <https://gatorevals.aa.ufl.edu/public-results/>.

### **Students with Disabilities**

Students requesting disability accommodations must first register with the Dean of Students Office. The Dean of Students Office will provide documentation to the student who must then provide this documentation to the instructor when requesting accommodation. Please provide this as soon as possible as accommodations may take longer to arrange for online courses.

### **U Matter, We Care**

Your well-being is important to the University of Florida. The U Matter, We Care initiative is committed to creating a culture of care on our online campus by encouraging members of our community to look out for one another and to reach out for help if a member of our community is in need. If you or a friend is in distress, please contact [umatter@ufl.edu](mailto:umatter@ufl.edu) so that the U Matter, We Care Team can reach out to the student in distress. A nighttime and weekend crisis counselor is available by phone at 352-392-1575. The U Matter, We Care Team can help connect students to the many other helping resources available including, but not limited to, Victim Advocates, Housing staff, and the Counseling and Wellness Center. Please remember that asking for help is a sign of strength. In case of emergency, call 911.

### **Honorlock**

This course uses Honorlock for proctoring of during-term exams. Honorlock is UF’s designated online proctoring service for classroom exams and quizzes that were previously in person but have moved online as part of the COVID-19 response effort. In order for you to take exams in this course you will need a government issued photo ID (or your Gator-1 ID), a working camera and microphone on your computer, a stable internet connection, and the Google Chrome browser (<https://chrome.com>) on your computer. Before and during your exam you will need to follow the Honorlock proctor’s instructions. Please familiarize yourself with the Honorlock student guide: <https://dce.ufl.edu/media/dceufledu/pdfs/Honorlock-Student-Guide-UF-Update.pdf> and the Honorlock Student Exam Preparation Information: <https://dce.ufl.edu/media/dceufledu/pdfs/Honorlock-Student-Exam-Preparation-Information.pdf>