

CHM3218 – Organic Chemistry/Biochemistry 2

Instructor

Dr. Alix Rexford
LEI302
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Office Hours

LEI302
*Monday 12:00 – 2:00 pm
Tuesday 3:00 – 4:00 pm
*Friday 12:00 – 2:00 pm

*Office hours will only be available via Zoom on Mondays & Fridays. Tuesday office hours will be offered HyFlex; See Canvas for Zoom links.

Open door policy: If my door is open you're welcome to stop in with a question or just to chat! You don't need to have a question to come to office hours. You're welcome to join in person or online to listen to the conversation, or just have others around while you work through PLAs and other assignments.

Teaching Assistants

Larissa Silva (larissa.silva1@php.ufl.edu)

Learning Assistants

- Braydon Bernard
- Jacob Borukhin
- Jack Campbell
- Michael Casanueva
- Kelly Feitel
- Amaya Fong
- Taylor Grounds
- Aryan Lund
- Maria Olivera
- Caitlin Tan
- Horacio Vega

Recommended Texts/Videos

Mentoring Modules in Biochemistry 1

AK lectures: <https://aklectures.com/subject/biochemistry>

Lehninger Principles of Biochemistry

Garrett & Grisham Biochemistry

Prerequisites

CHM 3217 or CHM2211 or permission of the instructor.

Course Objectives

This class covers all of the material commonly found in undergraduate biochemistry courses, with a special emphasis on using concepts from organic and physical chemistry to help students better understand biological chemistry. Topics will include amino acids and proteins, enzyme structure, mechanism, and kinetics, primary metabolism, nucleic acid structure, and metabolism.

Class Meetings

Class meets every Tuesday & Thursday from 12:50 - 2:45 pm in LEI 207. Attendance and ACTIVE participation in class is required. Occasional absences are permitted (see grading policy).

Tablets with a stylus are useful but are NOT required; students can easily share their work in real time by securing a phone above their desk or towards a white board. White boards will be available to students in the classroom.

Each class will consist of a combination of lecture, small group discussion, and main group discussions. Your small group will include the same 4-6 students every day. Course assistants and instructors will be available to encourage discussion and assist you in active learning. The goal of these discussion sessions is for students to learn how to apply your newly acquired knowledge to develop a deep understanding of essential concepts in biochemistry. It is important that everyone has a way to share work in real time with their groupmates; you **learn the most by making mistakes** and this classroom should be a safe space to fail and learn how to succeed on larger-stakes assignments.

Grading Policy

The final course grade will be based upon post/pre-lecture assignments, active participation during class, and exam assessments. 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/pre-lecture assignments (PLAs) will be available on Canvas at least one week before they are due and will consist of 10-15 questions related to the prior 2 lectures (recap) and/or the reading assignments for the upcoming 2 lectures (looking ahead). Prior to completing the assignment, you should review your lecture notes from the previous week's lectures and use the recommended resources to get an introduction to the next day's topics. Problems will be due at 11:59 pm on Mondays. PLA's will be graded on completeness of all (50%) questions and correctness of one (50%) randomly selected question.

Participation scores for Modules 1 and 3 will be earned by active participation with the whole class. Assistants will record anytime a student asks or answers a question either in person or using GroupMe during lecture. Importantly, these questions & responses must be in front of the entire class so that all students in the classroom benefit from the question being asked. Students will start with a baseline score of 18/25 points and will gain 2 points for each question or response up to 25 points. Students will have **roles in the small group sessions** that will help to foster a team dynamic. Roles will rotate throughout the semester. Your participation in the group and performance in your group role will be evaluated by your group mates to determine your participation score for Modules 2 and 4. For all participation scores, students will lose 2 points for each unexcused absence over 2 absences during the module.

The course material is broken into four modules. Each **module score** is composed of two or more exam assignments. Assignment due dates can be found on the Canvas course page. Many of the assignments throughout this course will be graded PASS/FAIL, with a ~90% or better required for a PASS. Two (2) attempts will be allowed for all PASS/FAIL assignments. The goal of this type of grading is **mastery** and ensures that students are turning in their best work. Partial attempts will not be graded, as partial credit will not be awarded on PASS/FAIL assignments. All assignments graded in this manner will have **detailed grading rubrics** so you will be fully aware of the requirements to earn a PASS.

Requirements for class attendance and make-up exams, assignments, and other work in this course are consistent with university policies that can be found at:

<https://catalog.ufl.edu/ugrad/current/regulations/info/attendance.aspx>

Module 1: January 14 – January 30

- Aqueous environments & buffers
- Amino Acids
- Protein Structure

Module 2: February 4 – February 25

- Enzyme mechanisms, kinetics & regulation
- Carbohydrates
- Nucleotides

Module 3: February 27 – March 25

- Lipids
- Cell membranes & transport
- Oxidative phosphorylation
- Metabolic reactions

Module 4: March 27 – April 22

- Glycolysis & gluconeogenesis
- Citric acid cycle
- Amino acid metabolism
- Fatty acid metabolism

Dates are subject to change

Important Dates:

- Spring Break: March 17 - 23
- Attendance Mandatory: Regulation Discussion: March 27
- Attendance Mandatory: Oral Exam 1: April 8
- Attendance Mandatory: Oral Exam 2: April 22

Grading Breakdown:

Component	Points	Percentage
Participation	100	10
*PLAs	100 (10/ea)	10
Module 1 Exam assessments	200	20
Module 2 Exam assessments	200	20
Module 3 Exam assessments	200	20
Module 4 Exam assessments	200	20

*The final exam is optional and can replace one Module Exam Assessment score (200 points). The final will be a take home exam due no later than April 29 @ 5 PM

Letter grades will be assigned as follows:

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

Makeup Policy

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

Tips for Success

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 4 hours per week, so you should be able to dedicate ~12 hours per week outside of class meetings to this course. I will be posting the lecture slides that are created during lecture to the Canvas site. To keep you on track and engaged in the material, I have designed primer questions for each lecture, as well as review questions from the previous lecture material. After reviewing lecture notes and doing the pre-class reading/videos, **pre-lecture assignments should take less than 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.

Each small group has their own Canvas page, as well as their own OneNote collaboration space, where your session recorder can upload the session's work. You can also use the group page to post announcements or engage in discussions with just your group members. The main Canvas page discussion board will also be utilized for discussions with the entire class. Your LAs will also set up a GroupMe for class discussions.

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 on the GatorEvals [Providing Constructive Feedback](#) FAQ page. 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 the [GatorEvals](#) website. Summaries of course evaluation results are available to students at the [GatorEvals Public Results](#) page. More information about UF's course evaluation system can be found at the [GatorEvals Faculty Evaluations](#) website.

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 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.