

Course Materials

eLC:

elc.uga.edu

BCMB3100 Intro Biochem and
Molec Biol Spring 2020 **26270**

Everything you need will be posted
on eLC: reading quizzes, case
studies, class notes, etc.

Textbook:

Biochemistry – Concepts &
Connections, 2nd edition
(Appling, Anthony-Cahill,
Mathews). I have selected
Modified Mastering Chemistry for
Biochemistry, and the book is
provided via e-text. I will NOT be
using Mastering Chemistry for
assessment, but Modified
Mastering provides study tools
you may desire to use. To sign up
for Modified Mastering, follow
these

instructions: [https://portal.mypearson.com/course-home/handout/lemons89626/Student Registration Handout lemons89626.pdf](https://portal.mypearson.com/course-home/handout/lemons89626/Student%20Registration%20Handout%20lemons89626.pdf).

Whiteboard (Optional):

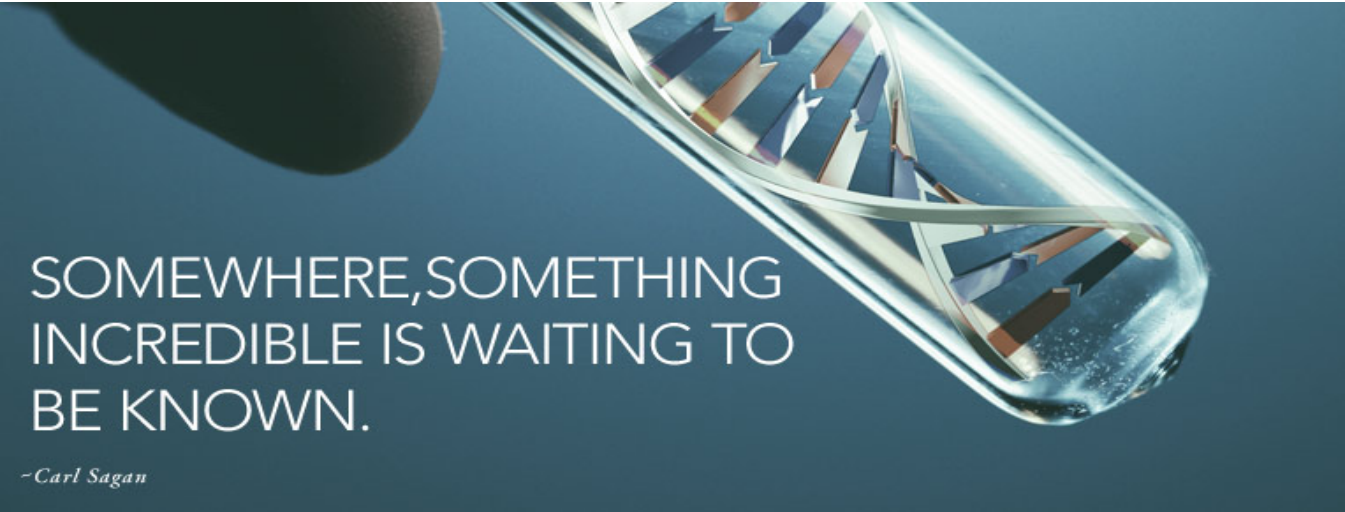
Consider purchasing a small
whiteboard to use for drawing
biochemical models and
showing them to peers, PLAs,
and me on Zoom and during
social-distanced meetings.

Introduction to Biochemistry and Molecular Biology

Tuesdays 12:45–3:35 & Thursdays 12:45-2:00 on Zoom:
<https://zoom.us/j/6404893297>.

I expect you to attend Zoom class, and you will do better
in the course if you attend. I will not give points for
attendance. Zoom sessions will be recorded and posted to
eLC. I hope this policy will encourage engagement while
allowing flexibility.

This syllabus contains all of the information you need to know about the course goals,
how you will be assessed, and how the course is organized. Please read through this
carefully!



SOMEWHERE, SOMETHING
INCREDIBLE IS WAITING TO
BE KNOWN.

– Carl Sagan

Instructor & Peer Learning Assistants – *Pictures omitted*

Dr. Paula Lemons

My research focuses on
biochemistry problem
solving by undergraduates
and the process by which
faculty change their
teaching.

Dr. Paula Lemons

Email: plemons@uga.edu

Office Hours: Thursdays, 11:30 am–
12:30 pm and 2-3 pm on Zoom or
at the picnic tables outside
Aderhold. To be announced
weekly.

I also am available by
appointment. Email me to set up
a time to meet via our class Zoom
link or someplace outside on
campus.

Kate Batchler

Renato Leon

Amy Lin

London Nava

Alberto Perez

Lukas Veltmaat

Noah Weinstein

Rohan Vuppala

Course Description and Objectives

In this course we will explore the chemistry of life.

This course will facilitate your learning of the topics of biochemistry and molecular biology. In our one semester together, I will give you the opportunity to learn biochemical concepts and to develop problem-solving skills and scientific reasoning. Concepts include the structure and function of biological molecules, the thermodynamics and kinetics of biochemical reactions, and metabolic pathways and how they are regulated. In this course you will not be expected to memorize the 20 amino acids that make up the proteins in our bodies, nor will you be asked to write the citric acid cycle from memory. Rather, I expect you to be able to use information about amino acids and metabolism to answer broader questions about biochemistry. Finally, I aim for you to gain interest in biochemistry and motivation to keep learning beyond our course as you see the real-world applications of the material.

The following statement addresses equity and justice and raises sensitive issues about race, society, and education:

I know the last several months have been challenging. You have faced many hurdles in your academic and personal lives due to the pandemic, and you cope with anxiety, chaos, and uncertainty. Ongoing issues of racism, white supremacy, and police brutality, which have a profound history, have moved to the forefront of national concern. I am appalled that again unarmed Black and Brown people were killed by police officers who should have protected life. I grieve alongside my Black and Brown students, colleagues, friends, and family for the current wrongs and the innumerable past injustices both individual and systemic.

While I hope change will happen on a national level, I will work towards change in the spaces I inhabit and work to be an ally. One of those spaces is BCMB 3100. I take this moment to let you know that a central commitment of my teaching is to promote equity and justice in my classroom and among my students. This includes using pedagogies that focus on student learning, assessing in ways that acknowledge growth and development, making myself available to students, nurturing a culture of respect in the way we talk and interact, growing in my understanding of systemic racism, working to be anti-racist, and helping members of the course community learn and grow in anti-racism.

Prior to the current atrocities, I tried to create a learning environment where all students knew they could succeed. Yet recent events remind me of the urgency of the matter. I will continue to endeavor to move BCMB 3100, UGA, and my community toward transformative change. I want every one of you to know your value and ability to learn and use biochemistry and your overall academic education for your own good and the good of your families and communities.

I invite you to share your learning and life experiences with me and to help me make this vision a reality. Thank you for being my student.

The best way to be successful is to complete ALL readings and assignments.

The fine print:

- If you must miss a quiz for a legitimate reason and with documentation, you may use that as your dropped quiz.
- Plagiarism is not allowed. For case studies, that means you are not allowed to copy someone else's work. For quizzes that means you must come up with your own answers and are not allowed to find them online or get them from another person. For discussion boards, this means your questions and responses should be your own not come from another source, unless you cite your source.
- If you would like me to reconsider a grade, you must explain your reasoning in writing and submit it to me via email within one week of receiving your score.

To calculate your grade, add up all the points you have earned, divide by the total points possible, which is 600, and multiply by 100. Refer to the grading scale for your final grade.

Assessment

I expect you to take charge of your learning. You will have to do some learning on your own. You should attend class regularly and participate. Learning is not a spectator sport!

Pre-Instruction Quizzes (130 points)

Fourteen times – for every case - you will complete a reading quiz to prepare you for instruction. The quiz covers textbook readings. Quizzes are worth 10 points. Your lowest score will be dropped.

Discussion Board Participation (130 points)

Fourteen times – for every case - you will need to make two substantive contributions to the eLC discussion board. Substantive contributions include an opening question, a response to another student that helps them understand the material, a response connecting two different ideas, etc. Substantive comments will receive full credit. Your lowest score will be dropped.

Post-Instruction Quizzes (325 points)

Fourteen times – for every case - you will complete a post-instruction quiz covering the case studies we do in class. Each quiz will include objectively-scored items and a short-answer item and will be worth 25 points. Your lowest score will be dropped.

“Not a Quiz” assignment (Optional): You may choose to replace your second-lowest post-instruction quiz score by completing the “Not a Quiz” assignment. “Not a Quiz” is due by **Monday, November 2 on eLC**. More details will be provided in the coming weeks. In brief, “Not a Quiz” allows you to show evidence of your learning in a non-traditional way. If you think you will want to complete this assignment, you should keep track of evidence throughout the course. Some ideas – among many – are documenting former and new study strategies, former and new ways of thinking about biochemistry, former and new ways of approaching problem-solving tasks.

Step-Up Points (15 points): You will earn these points by: meeting with me outside of class (Zoom or F2F), meeting with a PLA outside of class (only at their invitation, please), or gathering a small-group of classmates to study together. You will register the date, time, and details of your step-up event on eLC. These events are due by Monday, November 2.

Grading Scale

A	93 - 100	C+	77-79
A-	90 - 92	C	70-76
B+	87 - 89	D	60-69
B	83 - 86	F	≤ 59
B-	80 - 82		

Course Organization

This course is divided into four units. Each unit will be outlined in a unit calendar, which will be posted on eLC at the beginning of the unit. The unit calendars will list learning objectives, readings, assignments, and activities on a day-by-day basis. You are responsible for accessing the unit calendars at the beginning of each unit and completing all readings, quizzes, and assignments as noted in the calendars. Class time will be used to help you meet the learning objectives specified and to achieve success on assessments. I use case studies as the primary method of instruction. Class time is used to orient you to the cases through lecture and give you time to work on the cases alone and in groups, ask and respond to questions, and write and reflect. I lecture when necessary to explain concepts you are struggling with, but you also are expected to work during class time. As the saying goes, "The one who does the work does the learning." You will be assessed regularly as part of the case studies. Assessments are meant to give you repeated opportunities to learn, including from your mistakes.

Peer Learning Assistants – This course uses Peer Learning Assistants (PLAs) through the UGA PLAdawgs program: <https://ose.uga.edu/stem-plas/>. A PLA is an undergraduate who supports an active learning course that they previously completed with a high degree of success. PLAs will be assigned to particular groups of students and will facilitate your learning during class by observing your work, asking questions, and offering explanations. They participate in weekly prep sessions with the course instructors and take a pedagogy course as well. They are an invaluable resource to support your learning.

Groups – You will work with a group of your peers and a PLA during Zoom class on Tuesdays and via the eLC discussion board. You should sign up for a PLA group in eLC by August 27.

Units	Dates
Structure and Function of Biological Molecules (4 cases)	Aug 20 – Sep 20
Enzymes and Introduction to Metabolism (3 cases)	Sep 20 – Oct 11
Metabolic Pathways I (4 cases)	Oct 11 – Nov 8
Metabolic Pathways II (3 cases)	Nov 8 – Dec 3

Don't be afraid of hard work. Nothing worthwhile comes easily. Don't let others discourage you or tell you that you can't do it. In my day I was told women didn't go into chemistry. I saw no reason why we couldn't.

-Gertrude Elion, Nobel Prize in Physiology and Medicine, 1998

Disability Accommodations

Reasonable accommodations are available for students who have a disability. The Disability resource center (drc.uga.edu) is in the Division of Student Affairs (114 Clark Howell Hall; 706-542-8791 voice; drc@uga.edu) coordinates accommodations and services for students with disabilities.

**Be sure to check
eLC for detailed unit
calendars.**

Academic Honesty

As a University of Georgia student, you have agreed to abide by the University's academic honesty policy, "A Culture of Honesty," and the Student Honor Code. All academic work must meet the standards described in "A Culture of Honesty" found at: www.uga.edu/honesty. (http://www.uga.edu/honesty/ahpd/culture_honesty). Lack of knowledge of the academic honesty policy is not a reasonable explanation for a violation. Questions related to course assignments and the academic honesty policy should be directed to the instructor. More specifically, this means you will NOT, among other things:

1. Complete a quiz, case study, discussion board post, or course evaluation for someone else.
2. Copy someone else's quiz, case study, discussion board post, or evaluation.
3. Look at another person's work, materials while taking a quiz.
4. Use third-party sources to answer an assignment (e.g., Chegg).

Missed Quizzes and Assignments

If you are going to miss a quiz or other assignment due to illness, authorized representation of the University, or other personal circumstances, you must notify me as soon as possible and provide documentation for your absence. You may use this absence as your dopped score. Make-up quizzes will be considered on a case-by-case basis.

Unexcused late submissions are not acceptable and will result in a score of zero (0) being entered for that assignment/quiz.

Communication Policy

To comply with the Family Educational Rights and Privacy Act (FERPA), all communication that refers to individual students must be through a secure medium (UGAMail or eLC) or in person. Instructors are not allowed to respond to messages that refer to individual students or student progress in the course through non-UGA accounts, phone calls, or other types of electronic media.

Responsible use of technology for learning

Use of computers is necessary for this course. HOWEVER, using technology for purposes *unrelated to class is prohibited*. If you spend class time browsing Reddit, Snapchatting, or working on your fantasy football team, you are not only cheating yourself out of an opportunity to learn but you also are hurting your classmates. Your disengagement deprives others of the learning assistance you can provide. We are a community. Engage. Contribute. Learn.

The course syllabus is a general plan for the course; deviations announced to the class by the instructors may be necessary.

Mental Health and Wellness Resources

If you or someone you know needs assistance, you are encouraged to contact Student Care and Outreach in the Division of Student Affairs at 706-542-7774 or visit <https://sco.uga.edu>. They will help you navigate any difficult circumstances you may be facing by connecting you with the appropriate resources or services.

UGA has several resources for a student seeking mental health services (<https://www.uhs.uga.edu/bewelluga/bewelluga>) or crisis support (<https://www.uhs.uga.edu/info/emergencies>).

If you need help managing stress anxiety, relationships, etc., please visit BeWellUGA (<https://www.uhs.uga.edu/bewelluga/bewelluga>) for a list of FREE workshops, classes, mentoring, and health coaching led by licensed clinicians and health educators in the University Health Center.

Additional resources can be accessed through the UGA App.