CHEM 3511 Syllabus

Survey of Biochemistry, Section A, 3 credits

Fall 2026

Instructor Information

Instructor: Prof. Pamela Peralta-Yahya

Email: pperalta-yahya@chemistry.gatech.edu

General Course Information

Description

This course is a survey of the structure, function, reactivity, and analysis of biological molecules and central metabolism.

Course Learning Outcomes

Upon successful completion of this course, you should be able to:

1. Characterize and describe the structure of biological macromolecules;
2. Describe the role of biological molecules in nature;
3. Understand the biochemical reactions involved in glucose and fatty acid oxidation and energy transduction.
4. Integrate concepts in thermodynamics and kinetics to describe biochemical reactions.
5. Be familiar with various experimental methods used to investigate biological macromolecules.

Required Course Materials

- Textbook. Pratt and Cornely, Essential Biochemistry, 5th Edition.
- E-resource. WileyPLUS Pratt, Essentials of Biochemistry.
- Course materials and primary communication will be posted to **Canvas**.
- **WileyPLUS** will be used for homework assignments.

Grading Policy:

Your final grade will be assigned as a letter grade according to the following scale:

Letter Grade	Percentage	According to policy, grades at Georgia Tech are interpreted as follows:
A	85-100%	Excellent (4 quality points per credit hour)
B	75-84%	Good (3 quality points per credit hour)
C	65-74%	Satisfactory (2 quality points per credit hour)
D	50-64%	Passing (1 quality point per credit hour)
F	<50%	Failure (0 quality points per credit hour)

Assignments (value of final grade)

Exams	60%	Project report	10%
Weekly Quizzes	10%	Project presentation	8%
Homework	5%	Peer project evaluation	2%
In class Participation	5%		

Description of Graded Components

Exams. There will be 3 in-class exams interspersed throughout the semester. The exams will be multiple choice, with the possibility of some short answer questions. Exams are designed to test students' abilities to integrate multiple streams of knowledge to arrive at answers or reasonable conclusions. *No makeup exams will be given.* Exception: Dean of Students Approved Activities and absences.

Project. At the beginning of the semester, you will group yourselves in teams of **5 students** per team. Each team will submit a question about *how something in nature works at the molecular level* (examples: how do trees grow straight up?). The instructors will suggest modifications if necessary, and work with the team to arrive at an approved topic.

- **Project report**: Each team will have approximately six weeks to research the topic and write a report describing the molecular basis for the phenomenon in question.
- **Project presentation**: The team will incorporate feedback from the report into a Power Point presentation. Presentations will be held during class time at the end of the semester.
- **Peer project review**: Each student will peer review other student presentations during the end semester presentations.

Quizzes. There will be 10-minute online quizzes at the beginning of class time most Mondays. They will cover the assigned reading (even if the material is not explicitly covered

during lectures) and lecture notes covered since the latest quiz. Please bring a laptop, tablet, or smartphone to lectures to take the quizzes. *No makeup quizzes will be given.* Exception: Dean of Students Approved Activities and absences.

Homework. Homework problems will be given periodically for students to practice course material. *Late submissions will not be accepted*. Exception: Dean of Students Approved Activities and absences.

In class participation. One point (equivalent to 1% of the course overall grade) will be awarded for answering the instructor's questions during the lecture. There is a maximum of 1 point per lecture per student. There is a maximum of 5 points per semester. Check your participation grade on Canvas weekly to ensure that you have received credit for your work. *Inquiries at the end of the semester will not be honored.*

Course Policies

Attendance and/or Participation

Class attendance is not graded. In class participation is graded (See above). It is to your advantage to attend class to better understand the material and to take part of Exams.

Academic Integrity

Georgia Tech aims to cultivate a community based on trust, academic integrity, and honor. Students are expected to act according to the highest ethical standards. Review Georgia Tech's Honor Code and the student Code of Conduct.

Any student suspected of cheating or plagiarism on a quiz, exam, or assignment will be reported to the Office of Student Integrity, who will investigate the incident and identify the appropriate penalty for violations.

Core IMPACTS

Core IMPACTS is the University System of Georgia's General Education curriculum. If you are teaching a course that counts towards Core IMPACTS, you should include a syllabus statement about the Core area and associated career competencies. This resource developed by the Center for Excellence in Teaching and Learning and Online Education at Georgia State University includes template syllabus statements for each of the Core IMPACTS areas that you may adapt for your course.

Accommodations for Students with Disabilities

If you are a student with learning needs that require special accommodation, contact the Office of Disability Services (404-894-2563) as soon as possible to make an appointment

to discuss your special needs and to obtain an accommodations letter. Please also e-mail me as soon as possible in order to set up a time to discuss your learning needs.

Student-Faculty Expectations Agreement

At Georgia Tech, we believe that it is important to strive for an atmosphere of mutual respect, acknowledgement, and responsibility between faculty members and the student body. The Student-Faculty Expectations articulate some basic expectations that you can have of me and that I have of you. In the end, simple respect for knowledge, hard work, and cordial interactions will help build the environment we seek. Therefore, I encourage you to remain committed to the ideals of Georgia Tech while in this class.