CHM 5305, Chemistry of Biological Molecules

FALL 2022

Professor Michael E. Harris

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Lectures Tuesday and Thursday, Period 7 - 8 (1:55 PM - 3:50 PM)

Location DAU 0342

Office hours Wednesday 12-1pm and Friday 1pm-2pm

Office- CCB 302F

If you have a conflict or have additional questions use Canvas/email correspondence or request individually scheduled appointments.

Course Objectives This course aims to review fundamental principles of general, organic, and physical chemistry that form the framework for understanding biochemical systems. The content is designed to introduce students to concepts, tools, and techniques commonly found in chemical biology, and advance the their abilities to comprehend and apply these concepts to important research problems. Topics will include the chemistry, structures, functions, interactions, and techniques associated with DNA, RNA, proteins, glycans, polyketides, and terpenes. Students will also learn to analyze and interpret key concepts from primary literature and gain experience in oral and written scientific communication.

Textbooks Introduction to Bioorganic Chemistry and Chemical Biology, Van Vranken, D. and Weiss, G.

Optional Lehninger Principles of Biochemistry, Sixth or Seventh Edition, Nelson, D. L. and Cox, M. M.

Additional materials will be made available on the course e-Learning site (http://elearning.ufl.edu).

Class Schedule

2022 Fall CHM 5305 Class Schedule.pdf

Grading A = >90 B + = >85 B = >80 C + = >75 C = >70 C - = >65There are 3 graded assignments for this course:

3 Exams = 25% each totaling 75%

Literature and Presentation = various assignments totaling 20%

Participation = 5%

Assignments

Exams: There will be 3 in-class exams (100 points each). The three exams are scheduled for **Sept 20, Oct 18,** and **Nov. 15**. Concepts covered on all exams will be cumulative, although they will emphasize the material presented after the previous exam. After each exam, grade distributions will be posted.

Literature Presentation: This component of the course is a multi-part assignment ending with an in-class presentation. The four assignments and presentation will be individually graded and combined to form your overall grade for this assignment. See the course schedule or course e-Learning site for assignment due dates. Student presentations will be scheduled during the final few class periods.

Assignment	Points/Total % of Grade
Pick a topic and paper	0/0%
Annotation list of jargon/abbreviations	10/2.5%
Describe main text figures	10/2.5%

Find and summarize 2 directly related papers	10/2.5%
Cover letter	10/2.5%
Presentation	40/10%

Details regarding each assignment can be found on the course e-Learning site.

Late submission of assignments will result in the deduction of points. The instructor may waive the late penalty to a student who presents legitimate circumstances. There is no excuse for failing to communicate prior to the deadline.

Participation: Participation will be graded throughout the semester (20 points total). Your participation grade will be assessed based on your attentiveness during lectures and student presentations, and involvement during in-class polling, question sessions, and group discussions.

Practice problems: Practice problems from textbooks and previous course materials are provided as well as answer keys on the Canvas site. These will not be collected or graded. They are provided to facilitate thinking about the concepts discussed in class and give examples of types of exam questions.

Class Attendance: 100% attendance in person is expected but not graded; however, participation is graded. Excused absences are consistent with university policies in the undergraduate catalog and require appropriate documentation (<u>https://catalog.ufl.edu/ugrad/current/regulations/info/attendance.aspx</u>).

Make-Up Work: Make-up exams or presentations will only be allowed under extremely rare circumstances. All make-up work will need to be planned far in advance.

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 http://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/.

Class Demeanor: Students are expected to arrive to class on time and behave in a manner that is respectful to the instructor and to fellow students. Opinions, questions, and answers given by other students should be respected in discussion, and conversations that do not contribute to the discussion should be held at minimum, if at all.

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."

Diversity and Inclusion: We believe in equality for all and we welcome all ethnicities, races, genders, sexual orientations, cultures, faiths, ages, disabilities, and identities with respect. Each student is unique and brings their individual perspectives to our classroom and program. We are committed to maintaining an inclusive environment where each student is welcomed, respected, and supported during their educational and scientific journey.

Students with Disabilities: Students requesting classroom accommodation 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. Students with disabilities should follow this procedure as early as possible in the semester.

Additional Information: 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 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 9-1-1.