

CHEM-361 Physical Biochemistry (Spring 2021, Online)

Instructor: Rui Sun, ruisun@hawaii.edu

Teaching Assistant: Kazuumi Fujioka, kazuumi@hawaii.edu

Lectures: Tuesday/Thursday 9:00 - 10:15 AM **online**

Study Session: Wednesday 5:30 – 7:20 PM **online**

Office Hours: Tuesday 2:00 – 4:00 PM or by appointment **online**

TA Office Hours: Wednesday 2:00 - 4:00 PM or by appointment **online**

Textbook: *Physical Chemistry: Principles and Applications in Biological Sciences, 5th Edition.* (Available at the University Bookstore)

Calculator: You must have a calculator capable of natural logarithms and exponentials.

Description: This 3-credit-hour course is to cover three fundamental topics in Physical Chemistry: Thermodynamics, Chemical Kinetics, and Quantum Chemistry. Their applications to biochemistry will be introduced when applicable.

Grading Scheme: The learning outcomes will be assessed through homework and exams. Some bonus points are available from extra assignments and exams.

Method of Assessment	Points	Tentative Date
Homework	20	Almost Weekly
Midterm Exam 1	23	Feb 17 th
Midterm Exam 2	23	Apr 7 th
Final Exam	34	TBA
Bonus Points	about 10	TBA

1. Homework (20 pts)

Overview: Homework will usually be assigned almost weekly before Tuesday, and due by the Wednesday of next week. You can either use a pen and paper to write down your answer or type them out on a computer, but please make sure **to convert your homework to a single PDF file**

before submitting it. To submit the homework, email the PDF of your homework to our TA, Kazuumi Fujioka (kazuumi@hawaii.edu), before the deadline. The title of the email should be “**your-last-name_HW#.pdf**”. For example, I would name the email “Sun_HW1.pdf” if I was submitting my first homework. Each homework is worth 2.0 points.

Late Policy: You will lose 1/3 of the points if you submit the homework within 24 hours past the deadline. You will lose 2/3 of the points if you submit the homework between 24 to 48 hours past the deadline. You will score a zero if the homework has not been turned in within 48 hours after the deadline.

Miscellaneous:

- There won't be homework assignment on the first week of the semester or the two midterm-weeks.
- You can discuss the homework with other students; however, homework needs to be finished and submitted independently.
- You are responsible for understanding everything that you write down on the homework. I have never seen a student who does not take the homework seriously and is successful in this class.

2. Exams (80 pts)

Overview: There will be two midterm exams (23 points each) and one final exam (34 points). Exam questions will be based on the textbook reading assignment, the lecture content, and the homework. Overall, exam questions will be easier than the questions on the homework but will be slightly more difficult than the practice questions during the lecture.

Midterms: The midterms will be **90-min long** and take place during the recitation time (**Wednesday from 5:30 to 7:00 PM**). The dates of the midterms will be **Feb 17th** and **April 7th**. Please note that these dates are tentative and subject to change. You will get a notice of the midterm date at least one week ahead of time.

Final: The final exam will be a **120-min long**, but the date time is TBA. Although the final exam will be comprehensive, it will focus on the materials that are not covered in the two midterms.

Rules of the Exam:

1. All the exams will be conducted **online**.

2. Proctored via web camera (details below).
3. Open textbook. Open note. Internet usage only for Zoom (no Googling, Chegg, etc.).
4. Work independently.
5. Submit the exam via email in a single PDF file (details below).

Proctored via Web Camera:

1. Connect to our Zoom (URL will be sent 15 min prior to the exam) with a device that has a camera (laptop, desktop, tablet, smart phone, etc.) on. The camera should cover you and your desk from front. If you are using a digital textbook or need to access your note on a screen (either it is on a computer or on a tablet), the camera should cover the screen as well (a demonstration photo will be provided). No background is allowed.
2. Use common sense when setting up the camera and be mindful of potential leak of private information (roommate passing by, stuff on your shelf, etc.). There will be one lecture prior to the first exam dedicated to test the camera. If you are not sure about the setup, attend the lecture and get an OK from me. Exams without proper proctoring will get a zero.
3. The video of the exam will be recorded. The Zoom meeting will be locked 10 mins after the exam starts.

Submitting the exam:

1. Submit one single PDF via email to me at ruisun@hawaii.edu. A submission that is not in a single PDF will get a zero. You are responsible for making sure the PDF is clear and readable.
2. You get 15 minutes after the exam to convert your answers to a single PDF and email it to me. Please be aware that an email with attachment might take a couple of minutes to deliver. Exams received more than 15 min after the end of the exam will get a zero.

Letter Grade:

The sum of the grades, including bonus, will be your final grade, for which a letter grade will be given according to the following scale:

Total Points	Letter Grade	Total Points	Letter Grade
100	A+	72	C+
93	A	68	C
88	A-	64	C-
84	B+	60	D+
80	B	55	D
76	B-	50	D-

Study Session: Taught by the TA, Kazuumi Fujioka, the first hour of the study session will focus on reviewing the mathematics and physics that you would need for the success in this course (if you have already forgot). The second hour of the study session will focus on practicing problem solving. Attendance to the recitation is **highly recommended**, but not mandatory.

Policies:

- 1. No cheating.** You cheat, you get caught, you get an F. Plain and simple. Any attempt of cheating and/or plagiarism is regarded as a **most serious offense and renders the offenders liable to serious consequences, possibly suspension.**

- 2. Makeup exams.** Any absence of an exam will result in a grade of a zero. I cannot make accommodations for conflicting work schedules, vacation plans, or other non-emergency situations. Any medical emergency must be documented by a hand-written doctor's note by a local doctor with a physical address and phone number on the heading of the note. Unless absolutely impossible, make sure to let me know your absence ahead of time.

- 3. Keep track of your points.** Students are responsible for keeping track of their own points. It is essential that students retain all returned assignments and course information. Any materials not collected will be destroyed by the end of the following semester.

- 4. Partial Credit.** You will get partial credit for a reasonable attempt at each problem in both homework and exams, even if some details or the final answer are wrong or missing.

- 5. "D-" or better.** If you want to get a BS or BA of Biochemistry, you have to pass this class with a D- or better grade.

Special Conditions: Any student who feels s/he may need an accommodation based on the impact of a disability is invited to contact me privately. I would be happy to work with you, and the KOKUA Program (Office for Students with Disabilities) to ensure reasonable accommodations in my course. KOKUA can be reached at (808) 956-7511 or (808) 956-7612 (voice/text) in room 013 of the Queen Lili'uokalani Center for Student Services.

Academic Honesty: It is the aim of the University to foster a spirit of complete honesty and high standard of integrity. Any attempt of cheating and plagiarism is regarded by the faculty and administration as a **most serious offense** and renders the offenders liable to serious consequences, possibly suspension.
<http://www.catalog.hawaii.edu/about-uh/campus-policies1.htm>