

BIBC 100 Structural Biochemistry – SP2020 Syllabus

Lecture Time: Tu/Th 3:30 PM-4:50 PM

Instructor: Enfu Hui

Email: enfuhui@ucsd.edu

Office hours: Fridays 4-5 PM via Zoom

Website: <https://canvas.ucsd.edu/courses/12445/>

Lecture format: Due to the COVID-19 outbreak, all lectures and exams will be delivered remotely. The formal PowerPoint lectures will be pre-recorded (screencast) and uploaded to Canvas at least 24 hours prior to the scheduled lecture time. During the normal lecture time, the instructor will run a live Zoom session for Q/A and problem solving. Students are expected to study the pre-recorded lectures prior to the normal lecture time, mark their most confusing points, and clarify them during the live Zoom sessions. The live Zoom sessions **will also be recorded** and uploaded to Canvas, available to all students enrolled in this class. Attendance of the live Zoom lecture is optional but strongly encouraged because it promotes interactions between the students and the instructor.

All times posted in this syllabus is US Pacific Standard Time (PST).

Please note that this syllabus is subject to change, particularly because of campus efforts to contain covid-19. Any schedule changes will be posted on the course website. Make sure to frequently check the website to keep updated.

Please make sure that you check out this website for resources on how to learn remotely:

<https://digitallearning.ucsd.edu/learners/learning-remote.html>

SCHEDULE

Lecture	Date	Topic	Problem set	Discussion section	Wk
1	Mar 31 Tue	Course policies and zoom tutorials		No discussion section	1
2	Apr 2 Thu	Introduction			
3	Apr 7 Tue	Amino acids and peptides	PS 1 – covers lectures 2 & 3	No discussion section	2
4	Apr 9 Thu	Protein 2° and 3° structures			
5	Apr 14 Tue	Fibrous proteins and protein folding	PS 2 – covers lectures 4 & 5	Discussion section 1 for PS1 (contents for lectures 2 & 3)	3
6	Apr 16 Thu	Assisted protein folding			
7	Apr 21 Tue	Nucleic acids structure	PS 3 – covers lectures 6 & 7	Discussion section 2 for PS2 (contents for lectures 4 & 5)	4
8	Apr 23 Thu	Protein-DNA interactions			
9	Apr 28 Tue	Immune recognition	PS 4 – covers lectures 8 & 9	Discussion section 3 for PS3 (contents for lectures 6 & 7)	5
10	Apr 30 Thu	Oxygen binding proteins			
May 5 Tuesday Midterm on Canvas (test for lectures 2-8)				Midterm week	
11	May 7 Thu	Enzymes and catalysis	PS 5 – covers lectures 10 & 11	no discussion section	6
12	May 12 Tue	Cytoskeleton and motor proteins		Discussion section 4 for PS5 (contents for lectures 10 & 11)	7
13	May 14 Thu	Carbohydrates and Glycoproteins	PS 6 – covers lectures 12 & 13		
14	May 19 Tue	Membrane lipids and structure		Discussion section 5 for PS6 (contents for lectures 12 & 13)	8
15	May 21 Thu	Membrane proteins	PS 7 – covers lectures 14 & 15		
16	May 26 Tue	Signaling & receptors I		Discussion section 6 for PS7 (contents for lectures 14 & 15)	9
17	May 28 Thu	Signaling & receptors II	PS 8 – covers lectures 16 & 17		
18	June 2 Tue	Fluorescent proteins		Discussion section 7 for PS8 (contents for lectures 16 & 17)	10
19	June 4 Thu	Review			
June 8 Monday Final on Canvas					

TEXTBOOKS:

Optional. Lectures will cover much of the information in the readings listed on the schedule above. **Exams will be based only on materials covered in class and discussion sections.** Both texts are available new & used from the UCSD bookstore and other sources.

• **Lehninger Principles of Biochemistry** (Nelson and Cox) 7th Edition – listed above as Lehn

- **Introduction to Protein Structure** (Branden and Tooze) 2nd Edition – listed above as B&T

IMPORTANT DATES:

May 1: Deadline to drop without a W.

May 5: MIDTERM

May 15: Deadline to drop with a W.

June 5: Deadline to change grading option to P/NP.

June 8: FINAL EXAM

June 20: Grades available on Canvas.

(<https://blink.ucsd.edu/instructors/resources/academic/calendars/2019.html>)

GRADING:

POSSIBLE EARNED POINTS FOR THE QUARTER:	
140 points	Problem sets
150 points	Midterm
250 points	Final
540 points	Total
20 points	Bonus

Grade will be assigned according to this scale:

Points earned	Percentile	Letter grade	P/NP
≥ 540	100	A+	P
≥ 486	90	A	P
≥ 470	87	A-	P
≥ 454	84	B+	P
≥ 432	80	B	P
≥ 416	77	B-	P
≥ 400	74	C+	P
≥ 378	70	C	P
≥ 362	67	C-	P
≥ 346	64	D+	NP
≥ 324	60	D	NP
≥ 308	57	D-	NP

I understand this is a challenging time and that you may have challenges with accessing the course material, adapting to online-only learning, and taking online quizzes and exams. My goals are to teach you the course material, fairly test your knowledge of this material, and grade you accordingly, while keeping these challenges in mind.

ASSESSMENT:

MIDTERM (150 POINTS): to be administrated on Canvas, see schedule table for time. Covers material through Lecture 7. Exam questions will only cover material taught in class and the discussion sections.

FINAL (250 POINTS): to be administrated on Canvas, see schedule table for time. This is cumulative, but primarily focused on new material covered since the midterm.

For both the midterm and final, you will not be tested on material if it has not been discussed in class.

PROBLEM SETS (140 POINTS): You can earn up to 160 points through a total of 8 problem sets, 20 points each. These problem sets serve two purposes: 1) they will allow you to check and reinforce your learning; 2) they will allow you to earn easier points outside of exams, and thus can be considered as an open book exam. Problem sets will be posted on Canvas each week from week 2 in both Word and PDF format.

Seven out of the 8 problem sets, with the exception of problem set #4, will be discussed during our weekly discussion sections, one problem set per section. Discussion sections, led by your IA, will begin on week 3 through week 10, with the exception of week 6 due to midterm. For the entire quarter, there will be a total of 7 discussion sections with the time listed in the table below. The main purpose of the discussion sections is to work through the problem set posted in the prior week. They will also help you develop your analysis and problem-solving ability, and provide you with the opportunity to build relationships with fellow students and your IA.

Your section IA will likely run the discussion section remotely through a live Zoom session at the scheduled time, during which the problem set will be explained. However, you are expected to first work on these problem sets on your own prior to attending the discussion section, because it is likely that there won't be sufficient time for the IAs to go through every question. It is likely that the IAs will go through the questions based on a priority list.

Credit for completing the assigned problem sets can be earned by submitting your work to Canvas by the end of your officially assigned discussion section. Problem sets should be submitted electronically on Canvas, in **PDF format**. You can work on either the PDF format, the Word format, or a printed version if you have access to a printer. In the latter two cases, you will need to convert the problem set to PDF version for submission. If a question requires hand-drawing, you can draw on a piece of paper, take a photo of your drawing, and insert the picture into the Word or PDF.

Considering potential technical difficulties with remote submission, up to 15-minute buffer time will be granted for the submission deadline. For example, if your official discussion section is scheduled at 3:00-3:50pm Monday, then the deadline for your problem set submission is 4:05pm Monday. Problem sets submitted by the deadline will be graded by your official IA. Points will be awarded based on the accuracy of your answers. Late submissions will not be graded.

If illness or other circumstances prevent your attendance at a discussion section, you may still turn in your completed problem set on Canvas by the deadline detailed above and the table below, but you will lose points by submitting incorrect or incomplete answers.

Section	Day	Time	Instructional Assistant	Problem set due time
A01	Monday	8:00a-8:50am	Christina Trinh	9:05am Monday
A02	Monday	3:00p-3:50pm	Jennifer Harrison	4:05pm Monday
A03	Monday	4:00p-4:50pm	Justin Yu	5:05pm Monday
A04	Monday	7:00p-7:50pm	Lehan Li	8:05pm Monday
A05	Tuesday	7:00p-7:50pm	Dikran Khachadourian	8:05pm Tuesday

A06	Tuesday	8:00p-8:50pm	Dikran Khachadourian	9:05pm Tuesday
A07	Tuesday	6:00p-6:50pm	Rebecca Lau	7:05pm Tuesday
A08	Wednesday	12:00p-12:50pm	Yasman Zarabi	1:05pm Wednesday
A09	Wednesday	1:00p-1:50pm	Yasman Zarabi	2:05pm Wednesday
A10	Thursday	8:00a-8:50am	Rebecca Lau	9:05am Thursday

Bonus points: Problem set #4, to be uploaded in week 5, will NOT be discussed in sections due to midterm in week 6. Thus, problem set #4 will be considered as a bonus problem set. You should still work on this problem set on your own or in online groups. Up to 20 points credit can be earned by submitting the completed problem set #4 by the deadline.

INSTRUCTIONAL ASSISTANTS:

Name	Section	Office hour	Email Address
Lau, Rebecca Kavalier	A00	Wed, 3pm – 4pm	rklau@ucsd.edu
Khachadourian, Dikran	A00	Wed, 6pm – 7pm	dkhachad@ucsd.edu
Zarabi, Yasman	A00	Wed, 6pm – 7pm	yzarabi@ucsd.edu
Harrison, Jennifer Lynne	A00	TBA	jlh038@ucsd.edu
Yu, Justin Dennis	A00	TBA	jdy002@ucsd.edu
Li, Lehan	A00	TBA	l2li@ucsd.edu
Trinh, Christina	A00	TBA	chtrinh@ucsd.edu

CLASS POLICIES:

EXAMS:

There will be no scheduled make-up exams for the Midterm or Final. Failure to take the exam at the assigned time and place will result in a grade of zero for that exam. Extraordinary circumstances preventing you from taking an exam at the scheduled time must be submitted in writing and include official documentation of the cause as far in advance as possible to the instructors.

Any student who is found cheating on a midterm and/or final will be reported to the Academic Integrity Office according to university policy for an investigation into academic dishonesty (see section on Academic Integrity below).

Students suspected of AI violations on exams will be invited to Zoom follow-up meetings where they will be asked to (in real time, on video) justify their answers (before the graded exams or solutions are released). If the instructor isn't convinced during the meeting, or the student refuses to participate, they're submitted for AI violations.

REGRADES: If you discover an error in the grading of your exam, you may request a regrade by

emailing Dr. Hui or the instructional assistant for your section within one week of when the graded exams are made available. You must also submit a cover letter which questions you request for regrading and sign the bottom of the letter. No requests will be considered after one week, except for correction of point addition errors.

ACCOMODATIONS: Students requesting accommodations and services due to a disability for this course need to provide a current Authorization for Accommodation (AFA) letter issued by the Office for Students with Disabilities (OSD), prior to eligibility for requests. Receipt of AFAs in advance is necessary for appropriate planning for the provision of reasonable accommodations. Please note that instructors are unable to provide accommodations unless they are first authorized by OSD. For more information, contact the OSD at (858) 534-4382 (voice), osd@ucsd.edu, or visit osd.ucsd.edu."

ACADEMIC INTEGRITY

Students are expected to do their own work, as outlined in the UCSD Policy on Academic Integrity. **Academic misconduct** is broadly defined as any prohibited and dishonest means to receive course credit, a higher grade, or avoid a lower grade. Academic misconduct misrepresents your knowledge and abilities, which undermines the instructor's ability to determine how well you're doing in the course. Please do not risk your future by cheating.

As defined by UCSD policy, academic dishonesty includes:

- Taking an exam for another student or allowing another student to take an exam for you.
- Copying another student's work on an exam or allowing another student to copy your work.
- Altering graded exams or assignments and submitting them for a regrade.
- Bringing answers or cheat sheets to the exam in note form or using a calculator, phone or other electronic device.

Any student caught or suspected of cheating by doing one of the things on the list above will be reported to the UCSD Academic Integrity Coordinator and the Dean of the student's college. Confirmed cases of cheating on exams or altering an exam and submitting it for a regrade will result in the student receiving an automatic F as their final grade as well as other disciplinary actions determined appropriate by the Academic Integrity Coordinator.