

BIBC 100 Structural Biochemistry - Winter 2018 Syllabus

Lecture Time: Tu/Th 9:30-10:50 AM

Lecture Room: Sequoyah Hall 148

Instructor: Enfu Hui

Email: enfuhui@ucsd.edu

Office hours: Fridays from 5-6 PM, Pacific Hall 3502

Website: <http://ted.ucsd.edu> (Click on BIBC100 WI18)

Podcast: Video podcasts of each lecture will be available through TED

SCHEDULE

Lecture	Date	Topic	Reference
1	Jan 9 Tue	Introduction	Lehn 2.1, 2.2
2	Jan 11 Thu	Amino acids and peptides	Lehn 3; B&T 1, 2
3	Jan 16 Tue	Protein 2° and 3° structures	Lehn 4.1-4.3; B&T 3-5
4	Jan 18 Thu	Fibrous proteins and protein folding	Lehn 4.4; B&T 6
5	Jan 23 Tue	Assisted protein folding and misfolded diseases	Lehn 4.4; B&T 6
6	Jan 25 Thu	Nucleic acids structure	Lehn 8; B&T 7
7	Jan 30 Tue	Protein-DNA interactions	B&T 8-10
8	Feb 1 Thu	Immune recognition	Lehn 5.2; B&T 15
9	Feb 6 Tue	Cytoskeleton and protein motors	Lehn 5.3, 11.3; B&T 14
Feb 8 Thursday		Midterm (in class)	
10	Feb 13 Tue	Oxygen binding proteins	Lehn 5.1; B&T 2
11	Feb 15 Thu	Enzymes and catalysis	Lehn 6; B&T 11
12	Feb 20 Tue	Carbohydrates and Glycoproteins	Lehn 7
13	Feb 22 Thu	Membrane lipids and structure	Lehn 10.2, 11.1-2
14	Feb 27 Tue	Membrane proteins and protein-lipid interactions	Lehn 11.3, 12.5-6
15	Mar 1 Thu	Signaling & receptors I	Lehn 12; B&T 13
16	Mar 6 Tue	Signaling & receptors II	Lehn 12; B&T 13
17	Mar 8 Thu	Fluorescent proteins	B&T 17, 18
18	Mar 13 Tue	Protein engineering and design	B&T 5, 16
19	Mar 15 Thu	Review	
Mar 20 Tuesday		Final: 8 AM - 11:00 AM, room TBA	

TEXTBOOKS:

Recommended, but 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) 6th Edition – listed above as Lehn
- **Introduction to Protein Structure** (Branden and Tooze) 2nd Edition – listed above as B&T

IMPORTANT DATES:

February 2: Deadline to drop the class without “W” on transcript.

March 9: Deadline to drop without penalty of “F” grade.

March 20: FINAL EXAM (8 AM – 11 AM)

(<https://blink.ucsd.edu/instructors/resources/academic/calendars/2017.html>)

GRADING:

POSSIBLE EARNED POINTS FOR THE QUARTER:	
50 points	In class iClicker questions
140 points	Discussion section problem sets
150 points	Midterm
260 points	Final
600 points	Total

ASSESSMENT:

MIDTERM (150 POINTS): February 8th, in class. Covers material through February 1st. Exam questions will only cover material taught in class and the discussion sections. For both the midterm and final exam, you will not be tested on material from either textbook if it was not discussed in class.

FINAL (260 POINTS): March 20th, 8 AM – 11 AM, Location TBA. This is cumulative, but will emphasize new material covered since the midterm.

DISCUSSION SECTION PROBLEM SETS (140 POINTS): Discussion sections will begin in week 3. Required problem sets will be posted each week from week 2. These problem sets will be worked through together in discussion sections and handed into the Instructional Assistants at the end of each session. Eight problem sets will be assigned throughout the quarter for a total of 160 points. All students must complete at least 7 of these problem sets, and 140 of these points will be used to calculate final grades. Extra points may be earned for completing all 8 assignments, and will count as extra credit points (meaning you can earn a maximum of 20 additional points beyond the 600 allocated). Credit for completing the assigned problem sets can be earned by turning your work in either discussion section. If illness or other circumstances prevent your attendance at a discussion section, you may turn in your completed problem set by email to the Instructional Assistant before the discussion section, but you will lose points by submitting wrong answers.

IN CLASS ICLICKER QUESTIONS (50 POINTS): Questions will be asked in class that will require your response using an iClicker. Answers will begin to count for credit in week 2, at which point you can earn a total of 1 point per question - ½ point will be earned via participation and a second ½ point will be earned for answering correctly. Cumulative totals of your clicker points will be uploaded to TED at the end of each week. After you have achieved the maximum possible 50 points, your point total will not continue to increase.

INSTRUCTIONAL ASSISTANTS AND DISCUSSION SECTIONS:

INSTRUCTIONAL ASSISTANTS:

Sruti Malay smalay@ucsd.edu
Nicholas Nguyen ntn011@ucsd.edu

DISCUSSION SECTIONS:

Section	Day	Time	Location	Instructional Assistant
A01	Monday	9 AM – 9:50 AM	CENTR 202	Nicholas Nguyen
A02	Monday	6 PM – 6:50 PM	CENTR 202	Sruti Malay

Weekly discussion sections are important to your success in this course. They will help you develop your analysis and problem solving ability, and provide you with the opportunity to build relationships with fellow students and your instructional assistant. Students can go to either discussion section. Sections will meet for the first time on Monday of week 3 (January 22nd). Starting from week 2, a 20 points problem set will be posted online the Monday before the week it will be due. Students are encouraged to work on the problem set prior to attending discussion section for the week. All students must bring a printed copy of the problem set to their discussion section and the instructional assistant will review and explain the problem set each week. Students will hand in their problem set at the end of the discussion section. There will be a total of 8 problem sets, 7 of which will count towards your grade (the 8th will count as extra credit). If unusual circumstances (illness or emergencies) prevent you from attending discussion section, you may email your problem set to the IA, but you will lose points for any wrong answers.

CLASS POLICIES:**EXAMS:**

Pens and ID card (student ID or driver's license) are the only personal items you may have with you during the exam; any other items you bring (backpacks, phones, cameras, calculators and other electronic devices) must be placed entirely under your seat and are subject to being moved at the IAs' and professor's discretion.

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 observed to look at and/or copy off another student's paper during 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).

REGRADES: If you discover an error in the grading of your exam, you may request a regrade by submitting your exam in class to either Dr. Hui or the instructional assistant for your section within one week of when the graded exams are made available. To be eligible for a regrade, the exam must have been completed in non-erasable ink. You must also write up on a separate sheet attached to the exam

which questions you request for regrading and sign the bottom of this sheet. No requests will be considered after one week, except for correction of point addition errors. Exams will be photocopied prior to returning them to students, and any exam handed in for a regrade will be checked against the original.

ICLICKERS: You will need an iClicker for this class - any iClicker model is fine, but other clicker brands will not work. You can buy a new or used one at the UCSD Bookstore or another source. Your iClicker will need to be registered on TED to get credit for your in-class responses. To register, login and select BIBC100. In the menu block on the left side of the screen click on "iClicker Registration". Enter the identification (Serial) number from the back of your iClicker. If the serial number is illegible, bring your clicker to the instructor after class for help. iClickers only need to be registered once on TED - so you do not need to register again if you have already registered and used your iClicker for another class at UCSD. **Do not register at iClicker.com – this won't enter you into the TED database for UCSD classes!**

Don't switch your iClicker mid-quarter unless it's absolutely necessary - if you must use a new iClicker, notify the instructor because the response records in TED won't sync with one another and will need to be manually reconciled.

The grading system already includes some allowances (you do not need 100% participation in iClicker questions to get the full credit). For this reason, no additional allowances will be given for occasional forgotten or malfunctioning clickers (e.g. dead batteries), absence from class (regardless of the reason), or for students who add the class late and missed some classes. It's your responsibility to make sure that your clicker works properly. There will be sufficient "extra" clicker questions for everyone to have the opportunity to earn the maximum of 60 clicker points even given any of the above circumstances.

ADMINISTRATIVE QUESTIONS

To drop/add a class or with other similar questions/issues, please go to the Biology Undergraduate Student Affairs Office, Pacific Hall, Room 1129.

UCSD POLICY ON ACADEMIC INTEGRITY

Cheating or academic dishonesty will not be tolerated and all academic work will be completed by the student to whom it is assigned without assistance. 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
- Responding to clicker questions in class using another student's clicker
- Bringing answers or cheat sheets to the exam in note form or using a calculator, phone or other electronic device

If an IA sees a student using more than one clicker, both clickers will be confiscated immediately for the remainder of the class period.

Submitted exams will be photocopied before being returned to students. All exams handed in for regrading will be compared to the original.

Any student caught or suspected of cheating by doing one of the things on the list above (including those found using two or more clickers in class) 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.