

## BIBC 100 FALL 2020 SYLLABUS

**Class Time:** Remote via Zoom Tu/Th 12:30-1:50 PM  
**Instructor:** Alisa Huffaker  
**Email:** ahuffaker@ucsd.edu  
**Website:** <https://canvas.ucsd.edu> (click on BIBC100 FA20)

### SCHEDULE

| BIBC 100 Fall 2020 Course Schedule |  |   |                        |
|------------------------------------|--|---|------------------------|
| WEEK                               | LECTURES (Tu/Th): ASYNCHRONOUS, Dr. Huffaker will hold office hours to review lecture materials during scheduled class time    | SYNCHRONOUS DISCUSSION SECTION (Meet M/W), ATTENDANCE IS REQUIRED | EXAM                   |
| 1                                  | Th 10/01: Lecture 1.1 Life in aqueous systems  | None  | None                   |
| 2                                  | Tu 10/06: Lecture 1.2 Amino acid & protein properties<br>Th 10/08: Lecture 1.3 Protein Domains and structures                  | Mandatory attendance: Problem Set 1 due                           |                        |
| 3                                  | Tu 10/13: Lecture 1.4 Protein folding and stability<br>Th 10/15: Lecture 1.5 Chaperone-mediated folding                        | Mandatory attendance: Problem Set 2 due                           | None                   |
| 4                                  | Tu 10/20: Lecture 2.1 Nucleic acid biochemistry & structure<br><b>Th 10/22: MODULE 1 EXAM, SYNCHRONOUS ON CANVAS</b>           | Mandatory attendance: Review for Exam 1                           | <b>EXAM 1 Th 10/22</b> |
| 5                                  | Tu 10/27: Lecture 2.2 Structure of DNA-binding proteins<br>Th 10/29: Lecture 2.3 Structure of immune binding proteins          | Mandatory attendance: Problem Set 3                               | None                   |
| 6                                  | Tu 11/03: Lecture 2.4 Structure of oxygen-binding proteins<br>Th 11/05: Lecture 3.1 Structural facilitation of enzyme activity | Mandatory attendance: Problem Set 4                               | None                   |
| 7                                  | Tu 11/10: Lecture 3.2 Structure of carbohydrates<br><b>Th 11/12: MODULE 2 EXAM, SYNCHRONOUS ON CANVAS</b>                      | Optional attendance: Review for Exam 2                            | <b>EXAM 2 Th 11/12</b> |
| 8                                  | Tu 11/17: Lecture 3.3 Structure of membrane lipids<br>Th 11/19: Lecture 3.4 Structure of membrane proteins                     | Mandatory attendance: Problem Set 5                               | None                   |
| 9                                  | Tu 11/24: Lecture 4.1 Structures of signalling pathways 1<br>Th 11/26: THANKSGIVING HOLIDAY NO LECTURE                         | Mandatory attendance: Problem Set 6                               | None                   |
| 10                                 | <b>Tu 12/01: MODULE 3 EXAM, SYNCHRONOUS ON CANVAS</b><br>Th 12/03: Lecture 4.2 Structures of signalling pathways 2             | Optional attendance: Review for Exam 3                            | <b>EXAM 3 Tu 12/01</b> |
| 11                                 | Tu 12/08: Lecture 4.3 Protein design and engineering<br>Th 12/10: Lecture 4.4 CRISPR/Cas9 structure & engineering              | Mandatory attendance: Problem Set 7                               | None                   |
| 12                                 | FINALIS WEEK - NO LECTURES<br><b>Friday 12/18 11:30 AM: MODULE 4 EXAM, SYNCHRONOUS ON CANVAS</b>                               |   | <b>EXAM 4 Fr 12/18</b> |

**TEXTBOOKS:** Are optional. Exams will be based only on material covered in class & discussion sections.

**Lehninger Principles of Biochemistry** (Nelson and Cox) – listed above as Lehn

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

### COURSE INFORMATION SPECIFIC TO FALL 2020 REMOTE TEACHING SITUATION

**LECTURES:** Lectures will be asynchronous, meaning that they are recorded in advance. All lectures will be available as Zoom recordings posted to Canvas. Attendance during the regularly scheduled lectures is NOT mandatory, except for days when exams/quizzes are administered. Dr. Huffaker will be present on Zoom for live office hours/lecture review each Tuesday/Thursday during the scheduled lecture time.

**ZOOM TRAINING:** We will all be using Zoom a lot this quarter. For those who could use assistance understanding how to connect to and use Zoom, here are some helpful sites:

<https://aah.ucsd.edu/content-tutoring/zoom.html>

<https://support.zoom.us/hc/en-us/categories/200101697-Getting-Started>

**FACILITATING INTERACTION WITH INSTRUCTORS:** While we're all disappointed not to be able to spend the quarter together, the instructor and instructional assistants are working very hard to ensure you leave the class with the same general knowledge and opportunity for interpersonal interactions. Although lectures will be pre-recorded to accommodate students in different time zones, or managing additional responsibilities, we are still committed to in-person interactions, so attend office hours. We're looking forward to working with you this quarter and helping you do your best!

### **UCSD COVID19-SPECIFIC INFORMATION AND RESOURCES FOR STUDENTS:**

**STUDENT AFFAIRS COVID19 INFORMATION:** A broad website with links to resources for supporting students during these challenging circumstances, including (but not limited to) resources for: Student Retention and Success, Remote Student Employment, Preparing for Remote Learning, Academic Support, Internet and Technology Access, Remote Library Resources, Accommodations for Students with Disabilities, Student Health and Mental Wellness Services, and Information for International Students, <https://vcsa.ucsd.edu/news/covid-19-info.html>

**UCSD COVID19 GENERAL INFORMATION:** <https://coronavirus.ucsd.edu/>

**ASSISTANCE COPING WITH STRESS:** If you are experiencing heightened feelings of anxiety, please contact Counseling and Psychological Services (CAPS), <https://wellness.ucsd.edu/CAPS/Pages/default.aspx>. Also see this helpful article from thisweek@ucsandiego with coping strategies and resources available from both UCSD and more generally:

[https://ucsdnews.ucsd.edu/feature/coping-with-coronavirus-](https://ucsdnews.ucsd.edu/feature/coping-with-coronavirus-stress?utm_source=This+Week+Subscriber+List&utm_campaign=c2382a82da-)

[stress?utm\\_source=This+Week+Subscriber+List&utm\\_campaign=c2382a82da-](https://ucsdnews.ucsd.edu/feature/coping-with-coronavirus-stress?utm_source=This+Week+Subscriber+List&utm_campaign=c2382a82da-)

[THIS\\_WEEK\\_2020\\_03\\_26&utm\\_medium=email&utm\\_term=0\\_db568fca07-c2382a82da-92196685](https://ucsdnews.ucsd.edu/feature/coping-with-coronavirus-stress?utm_source=This+Week+Subscriber+List&utm_campaign=c2382a82da-THIS_WEEK_2020_03_26&utm_medium=email&utm_term=0_db568fca07-c2382a82da-92196685)

## **INSTRUCTIONAL ASSISTANTS AND DISCUSSION SESSIONS**

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### **DISCUSSION SECTIONS:**

| Section | Day       | Time             | Instructional Assistant | Email             |
|---------|-----------|------------------|-------------------------|-------------------|
| A01     | Monday    | 3:00 - 3:50 PM   | Tobin Groth             | tgroth@ucsd.edu   |
| A02     | Monday    | 4:00 - 4:50 PM   | Tobin Groth             | tgroth@ucsd.edu   |
| A03     | Monday    | 5:00 - 5:50 PM   | Tiantai Ma              | t2ma@ucsd.edu     |
| A04     | Wednesday | 12:00 - 12:50 PM | Neb Getahun             | ntgetahu@ucsd.edu |
| A05     | Wednesday | 3:00 - 3:50 PM   | Zidane Ong              | z1ong@ucsd.edu    |
| A06     | Wednesday | 1:00 - 1:50 PM   | Alan Doan               | avdoan@ucsd.edu   |
| A07     | Wednesday | 2:00 - 2:50 PM   | Xandrea Pasion          | xpasion@ucsd.edu  |
| A08     | Wednesday | 4:00 - 4:50 PM   | Nathaniel Tsai          | n1tsai@ucsd.edu   |
| A09     | Wednesday | 5:00 - 5:50 PM   | Tiantai Ma              | t2ma@ucsd.edu     |
| A10     | Wednesday | 6:00 - 6:50 PM   | Veronica Najera         | vinajera@ucsd.edu |

Weekly discussion sections are critical to your success in this course. They will help you develop your analysis and problem-solving ability that will be evaluated by the exams. Discussion sections also provide you with the opportunity to build relationships with fellow students and your Instructional Assistant. **Students are required to synchronously attend the discussion section for which they are registered via Zoom.** Sections will meet for the first time the week of October 5-9. A 25-point problem set will be posted online for discussion in section meeting each week. Students are to complete the problem set prior to attending discussion section for the week to the best of their ability. All students must be prepared to contribute to section discussions.

## GRADING

| <b>POSSIBLE EARNED POINTS FOR THE QUARTER:</b> |                                     | <b>GRADING SCALE:</b> |    |
|--|-------------------------------------|-----------------------|----|
| 40 points                                      | Discussion section participation    | ≥ 500 points (100%)   | A+ |
| 150 points                                     | Discussion section problem sets     | ≥ 450 points (90%)    | A  |
| 10 points                                      | Writing/submitting an exam question | ≥ 435 points (87%)    | A- |
| 300 points                                     | Exams                               | ≥ 420 points (84%)    | B+ |
| <b>500 points</b>                              | <b>Total</b>                        | ≥ 400 points (80%)    | B  |
|  |                                     | ≥ 385 points (77%)    | B- |
|  |                                     | ≥ 370 points (74%)    | C+ |
|  |                                     | ≥ 350 points (70%)    | C  |
|  |                                     | ≥ 335 points (67%)    | C- |
|  |                                     | ≥ 320 points (64%)    | D+ |
|  |                                     | ≥ 300 points (60%)    | D  |
|  |                                     | ≥ 285 points (57%)    | D  |

- Grades will be assigned based on points earned using the scale listed on the right.
- **Curving:** If necessary, all point cutoffs will be adjusted downward so that at least 50% of the class receives an A or B. Under no circumstances will point cutoffs be adjusted upward.

## ASSESSMENT

**DISCUSSION SECTION PARTICIPATION (40 POINTS):** Discussion sections will begin starting Monday, Oct. 5<sup>th</sup>. Weekly discussion sections are critical to your success in this course. They will help you develop your analysis and problem-solving ability that will be evaluated by the exams. Discussion sections also provide you with the opportunity to build relationships with fellow students and your Instructional Assistant. **Students are required to synchronously attend the discussion section for which they are registered via Zoom.** There are 8 mandatory discussion section meetings over the course of the quarter, you will receive 5 points for your active participation in each (8 x 5 = 40). To obtain full points for participation, you need to attend for the full class period and actively participate in class discussion.

**EXAMS (300 POINTS):** There will be four equally weighted exams for the course, each worth 100 points. Your lowest exam score will NOT be counted towards your grade (i.e. one exam will be dropped). **Exams will be administered in real time on Canvas/Zoom during the scheduled lecture time on the dates designated in the course schedule: Thursday October 22, Thursday November 12, Tuesday December 1, and Friday December 18.** The exams are NOT cumulative, and exam questions will only cover material taught in class and the discussion sections for each given module.

**PROBLEM SETS (150 POINTS):** Required problem sets will be posted for each week as designated in the course schedule above, and are your most valuable study material, as they are designed to reinforce the learning objectives for each lecture and cover the primary concepts. Complete the problem set to the

best of your ability prior to your discussion section and then be prepared to contribute to discussing and working through the problems together in your discussion section meeting. Each problem will be submitted through Canvas by 11:59 PM on Wednesday the week that they are due. If students do not make a good-faith effort to complete problem sets to the best of their ability prior to attending section, and do not participate in a rigorous discussion, then due date/times will be moved to require submission during your section meeting rather than Wednesday night. Seven problem sets will be assigned throughout the quarter for a total of 175 points. All students must complete at least 6 of these problem sets, and 150 of these points will be used to calculate final grades.

**WRITING AND SUBMITTING EXAM QUESTIONS (10 POINTS):** Writing good exam questions is difficult, and also an excellent test of knowledge. To exercise analytical thought while studying the course material, students are invited to submit one exam question for each of the four modules of the class (4 x 2.5 = 10 points total). Questions should be formatted as multiple choice with correct answer designated, and brief explanation of learning objective for the question. An example question will be provided to demonstrate desired formatting. If your question is a good one, it may be included on the exam!

## COURSE POLICIES

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### EXAMS

Exams will be 80 minutes in length. Questions will include several types of questions such as multiple-choice, short answer questions, labeling structures, true/false and other types of questions. **Exams will be administered synchronously over Canvas during the scheduled lecture time, and all students will be required to enable their video camera while taking the exam. Use of cameras, cell phones, tablets or other electronic devices capable of storing information is NOT allowed during the exams. Students may not work collaboratively or seek information from any external sources or notes during the exams.** There will be no make-ups for exams unless you provide documents for medical or family emergency with contact information. **You must contact the instructor about the situation before the exam** to discuss your options. Once you have taken an exam (or part of it), you will not be able to drop the score or negotiate a reduction of its impact on your grade for any reason. If you do not take the exam, your grade will be a zero. Once exams have been graded, you will be able to view your score at the course website. After the quarter you will also be able to view your final exam score and final grade at this location.

Students for which the Office of Students with Disabilities have issued exam accommodation letters should present their letter at the beginning of the quarter or as soon as it is available. Please contact Dr. Huffaker at least one week prior to each exam to arrange for accommodation.

### ADMINISTRATIVE QUESTIONS

To drop/add a class or with other similar questions/issues, please contact the Biology Undergraduate Student Affairs Office.

### 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
- Seeking answers to exam questions on any website/social media platform, etc.
- Altering graded exams or assignments and submitting them for a regrade
- Communicating with other students during the exam
- 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 (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.

## **UCSD STUDENT RESOURCES (not specific to this course)**

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### **ACADEMIC SUPPORT RESOURCES:**

- Teaching and Learning Commons at UCSD: <http://commons.ucsd.edu/students/index.html>
- Supplemental Instruction: Scheduled sessions to support students in classes that many UCSD students find challenging. A list of supported classes and schedules may be found at: <https://commons.ucsd.edu/students/supplemental-instruction/index.html>
- Triton Achievement Partners: Drop-in tutoring for lower division math and chemistry courses. <https://commons.ucsd.edu/students/math-science%20tutoring/index.html#Math-and-Chemistry-Tutoring>
- Writing and Critical Expression Hub: See <http://commons.ucsd.edu/students/writing/index.html>. Writing mentors on staff (including some biology expertise and training in science writing) work with students to improve their writing skills while working on class writing assignments (e.g. lab reports!) and other writing projects. See their drop-in hours, and options for appointments.
- OASIS: Office of Academic Support and Instructional Services also offers tutoring, writing and mentoring support – see <https://students.ucsd.edu/sponsor/oasis/> Each year, OASIS serves 3,000 students in language, math, science, study skills, and writing as well as peer counseling and peer mentoring. Located on the third floor of Center Hall, (858) 534-3760, oasis@ucsd.edu.

### **HEALTH AND COMMUNITY RESOURCES (IN ALPHABETICAL ORDER):**

- Black Resource Center: a campus community center that serves everyone at UC San Diego while emphasizing the Black experience. Promotes scholarship, fosters leadership, and cultivates community through the committed, collaborative effort and support of faculty, staff, and the broader UC San Diego community. <http://brc.ucsd.edu/>
- Counseling and Psychological Services: (CAPS) provides FREE, confidential, psychological counseling and crisis services for registered UCSD students. CAPS also provides a variety of groups, workshops, and drop-in forums. See <http://caps.ucsd.edu/> and/or call (858) 534-3755.
- Cross-Cultural Center: strives for meaningful dialogues and context across all cultures, particularly those of underrepresented or underprivileged backgrounds. Offers supportive and educational

services through art, social and educational programs, workshops, and outreach. Welcomes creative venues for enhancing social consciousness and equity. <http://ccc.ucsd.edu/>

- LGBT Resource Center: provides a visible presence on campus and enhances a sense of connection and community among LGBT faculty, staff, students, alumni and the UC San Diego Community. <http://lgbt.ucsd.edu/>
- Office for the Prevention of Harassment & Discrimination (OPHD): provides assistance to students with concerns about bias, harassment, and discrimination. UCSD is committed to upholding policies regarding nondiscrimination, sexual violence and sexual harassment. Students have options for reporting incidents of sexual violence (e.g. sexual assault, dating violence, domestic violence, and stalking) and sexual harassment. Information about reporting options may be obtained at OPHD at (858) 534-8298, [ophd@ucsd.edu](mailto:ophd@ucsd.edu), or <http://ophd.ucsd.edu>. Students may also receive confidential assistance at the Sexual Assault Resource Center at (858) 534-5793, [sarc@ucsd.edu](mailto:sarc@ucsd.edu) or <http://care.ucsd.edu>.
- Office for Students with Disabilities (OSD): works with students who have documented disabilities to provide reasonable accommodations. See <https://disabilities.ucsd.edu/about/index.html> or call 858.534.4382 and/or email [osd@ucsd.edu](mailto:osd@ucsd.edu). Students in need of disability accommodations for a UCSD course must provide their instructor with a current Authorization for Accommodation (AFA) letter issued by OSD. If you have an AFA, please arrange to meet privately with me during the first week of the quarter so we can discuss your accommodation. If you have any questions or concerns about a disability, please discuss with me!
- Raza Resource Centro: a lively space where students study, meet, write, get tutoring, and most importantly are in community. It is a space where Latina/Chicano organizations hold meetings, events and where culture, art, and academics interconnect. <http://raza.ucsd.edu/>
- Student Veterans Resource Center (SVRC): supports military-affiliated students in making the transition to campus life and facilitating their progress toward degree completion. The Center also provides opportunities for peer-to-peer support, mentoring and social networking. See <https://students.ucsd.edu/sponsor/veterans/>
- Women's Center: serves as a resource for the entire campus community while placing the experiences of diverse women at the center through resources provided, programming and learning opportunities facilitated, and dynamic community space. <https://women.ucsd.edu/>

There are many other resources available to you on campus. If you want to know more about where you can go for support, please let me know and we'll work together to identify useful resources!