

BIBC 100 Structural Biochemistry

Time: M–F 8:00 am – 9:20 am

Instructor: Marc Sprague-Piercy

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Course Goals

By the end of the course you will be able to understand how the structure-function relationship of biological macromolecules drive the diversity and capabilities of life. You will learn the structures of these classes of molecules and how their chemistry drives biological processes at the level of individual atoms and bonds.

Format

There will be a daily lecture and once weekly discussion sections. You only have to attend one of the discussion sections per week. Attendance of the lectures is not required but highly recommended. The lectures will be recorded and posted to canvas, The discussion sections will not be. The exams will be taken in person.

Schedule

Week	Topic	Readings	Problems
1	Water, forces, secondary structure	2.1–2.3, 3.1–3.4, 4.1–4.3,	1 (DUE July 6)
2	Folding, Biochemistry	3.3, 4.4, 5.1, 5.2	2 (DUE July 13)
3	Nucleic Acids, Cytoskeleton	8, 5.3	3 (DUE July 20)
Midterm July 15 8-9:20 am			
4	Enzymes, Carbohydrates	6.1-6.5, 7.1-7.3	4 (DUE July 25)
5	Binding, Fluorescence	12	5 (DUE July 29)
Final July 29 8-10:20 am*			

Textbooks

The reading listed will serve as an important source when understanding the topics covered in class, but if we did not cover a topic in class then it will not appear on the exam.

Any edition of Lehninger Principles of Biochemistry (Nelson and Cox) will work but the chapters list above are for the 7th edition.

Important Dates

July 1: Last day to add a class

July 7: Last day to request a rescheduling of an exam

July 8: Last day to change grade option and drop without a W

July 15: Last day to drop, but you get a W

August 6: Grades available

Grading Breakdown

The points in the course will be distributed according to the following breakdown of assignments.

Points	Assignments
160	Problem worksheets
80	Quizzes
100	Midterm
160	Final
500	Total

Grade	Points
A+	500
A	450
A-	435
B+	420
B	400
B-	385
C+	370
C	350
C-	335
D+	320
D	300
D-	285

If you are taking the class Pass/No-Pass then if you earn above 334 points then you will earn a pass for the class. This is subject to change.

Exams

There will be two exams, a midterm and a final. The midterm will take place in week three. The final will take place at the end of the term. To pass the course you must take both exams.

Quizzes

There will be a small quiz before each class covering the information from the class before. In total the quizzes will add up to 80 points, with each quiz making up 4 points. 5 quizzes will be dropped.

Discussion Sections

While there are several discussion sections available to you, you are only required to attend one. During these sections you will go over the problem sets with the instructors assistant and they will be there to answer any questions that you might have about the lecture.

Assessments

Midterm (100 points): This will be administered in person during the normal lecture time on July 15th. It will cover everything from the first 3 weeks of the course.

Final (160 points): This will be administered at 8 am on July 29th and will be cumulative.

Problem Sets (160 points): There are 5 problem sets, one will be dropped.

Quizzes (80 points): After each class there will be a quiz on canvas that must be complete by the beginning of class the next day. These are short and each worth 4 points, just to serve as a short reminder of what was talked about during the lecture. There will be no quiz due on July 4th, or any day that we have an exam.

Discussion Board

On canvas there is a discussion board where you can post questions to discuss the class or talk about concerns that you might have. You can discuss the problem sets, just don't post a complete solution. If you would like to discuss a private matter you can email the instructor or teaching assistants in the class.

Class Policies

Exams Students must take both exams to pass the course. The exams open note and open book. If you cannot attend the exams due to an emergency then you must email me about the situation BEFORE the exam with proper supporting documents.

Regrades must be submitted to me within 3 days of receiving your graded exam back. The whole exam will be regraded.

Learning Environment This classroom is a safe and supportive environment where participants are free to express themselves and support a wide variety of thoughts, perspectives, and identities. The policy extends to any discussions taking place on canvas as well. You must engage your fellow students with respect.

Academic Integrity All work must be completed on your own. Students can collaborate to find solutions but just copying answers is not permitted. By misrepresenting your level of knowledge or abilities as assessed by the assignments you are engaging in academic misconduct.

The exams and quizzes must be completed on your own, no collaboration is allowed. During the exams and quizzes you are permitted to use your notes, lecture materials, books, and online resources.

You can, and are encouraged to, collaborate with other students to complete the problem sets.

For more information about academic integrity and dishonesty please refer to the UCSD policy on the matter. In short academic dishonesty includes:

- Taking an exam for another student
- Copying work
- Finding answers for exams online or elsewhere
- Communicating with others during an exam

Academic dishonesty includes much more. Any student suspected of breaching this policy will be referred to the UCSD Academic Integrity Coordinator. If cheating has been confirmed then the student will get an automatic F if not worse.

Detailed information can be found here <https://students.ucsd.edu/academics/academic-integrity/index.html>

Accommodations 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.