

# BIOL 3310 Cellular and Molecular Biology, 3 units

Spring 2018, M, W, F -11 -11:50am

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<b>Instructor</b>	Manpreet Kaur, Ph.D.
<b>Office</b>	N254
<b>Office hours</b>	Fri 12-1pm or by appointment
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<b>Webpage</b>	<a href="https://blackboard.csustan.edu/">https://blackboard.csustan.edu/</a> (lecture notes, exam results)

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## Course Description

Basic concepts of cellular phenomena dealt with at the molecular level of organization with emphasis on the molecular mechanisms involved in biosynthesis, cellular respiration, membrane function, signal transduction, intracellular transport, cell division and gene expression.

## Course objectives

For students to understand the molecular basis of various cellular processes. Know the relation between cell structure, and function, and connect the basic principles of the major components of the cell to health and disease. To encourage students to think critically and interpret hypothetical experimental observations based on concepts learned in class.

## Course Requirements

Students must have completed BIOL 1050 and BIOL 1150 as well as CHEM 1100 and CHEM 1110.

## Required Text and Materials

Essential Cell Biology, 4th ed. Alberts, et al. ISBN:9780815344544

Becker's World of the Cell, 9<sup>th</sup> edition, Hardin *et al.* [SEP]

Information for the course (Lecture notes, syllabus, exam results, etc.) will be posted on the course's Blackboard (<https://blackboard.csustan.edu/>). Lecture slides will be posted online the day of each class. Bio 3310 tends to be a fast-paced, intense course that requires good study skills, daily review of course materials, and a commitment to learning. I strongly recommend that students create daily study schedules, or form a study group.

## ADD/DROP Policies

February 7 is the last day to add a class. February 21 is the last day to drop the course. The add/drop policies for this class are the same as the university add/drop policies.

## Course Etiquette

1. Arrive prepared and on time for class.
2. Turn off and put away all cell phones and pagers. No cell phone will be allowed out at any time.
3. Please do not carry on conversations with your neighbors once class has started. Such behavior is highly disrespectful and very distracting to me and to the other students around you.

## Grading Policies

1. **Academic Dishonesty and Misconduct:** There is zero tolerance for cheating. Cheating in any capacity in this class will result in penalties ranging from a minimum of a zero on the assignment or exam to a maximum of expulsion from California State University, Stanislaus as indicated by the official University Policy regarding dishonesty and misconduct. Exams, reports, and/or other assignments are indicators of individual performance. Copying off of another student's exam, plagiarized reports, or other assignments constitutes cheating. Taking out a cell phone during an exam is considered cheating, your exam will be confiscated, and you will receive zero points for that exam.

2. **Regular attendance is vital to your success in this course:** You are expected to attend class regularly, come to class on time. Attendance requires not only your physical presence, but your attention and participation as well. Students who are physically present, but inattentive (including, but not limited to, sleeping, excessive conversation, texting, emailing, web-surfing, being disruptive, arriving late, leaving early, etc.) may be asked to leave.

### 3. Exams:

a. There will be 4 exams during the term and a final. The final will be comprehensive. One of the four hourly exam will be dropped. Random pop up quizzes at the start of class will also contribute to the final grade.

b. You must arrive on time for the exam. You will not be allowed to leave the room once the test has started. If you are tardy, you will not be given extra time to finish the exam.

c. After graded exams have been returned, you have **one week** to review exams or dispute errors; no grades will be changed after that time.

d. **Since the lowest hourly exam will be dropped, NO MAKEUP EXAMS WILL BE GIVEN AND NO EXAMS WILL BE GIVEN IN ADVANCE.**

### 4. Grading

Total grade will be out of 300 points

Quizzes	50pts
3 exams (50 pts each)	150 pts
Final exam	<u>100 pts</u>
Total	300 points

Grading will be based on a percent scale:

93-100 = A, 90-92 = A-, 87-89 = B+, 83-86 = B, 80-82 = B-, 77-79 = C+, 73-76 = C, 70-72 = C-, 67-69 = D+, 60-66 = D, < 60 = F

#### NOTE:

a. Take care of your grade. Remember you earn your grade; it is not given to you.

b. The instructor reserves the right to reduce your grade due to excessive absences and/or tardiness.

***Tentative schedule (on next page):*** The schedule is subject to minor changes

Date	Day	Topic	Chapter
26-Jan	F	Course Introduction	
29-Jan	M	Preview of the Cell	1
31-Jan	W	Chemical Components of cells	2
2-Feb	F	Organic molecules of Cell	
5-Feb	M	DNA to protein /Energy, Catalysts and Biosynthesis	3
7-Feb	W	Energy, Catalysts and Biosynthesis	
9-Feb	F	Protein Structure and Function	4
12-Feb	M	Protein Structure and Function	
14-Feb	W	Enzymes	
16-Feb	F	Review	
19-Feb	M	<b>EXAM 1</b>	
21-Feb	W	Membrane Structure	11
23-Feb	F	Membrane transport	12
26-Feb	M	Membrane transport	
28-Feb	W	Glucose catabolism	13
2-Mar	F	Glucose catabolism	
5-Mar	M	Aerobic respiration	14
7-Mar	W	Aerobic respiration	
9-Mar	F	Photosynthesis	
12-Mar	M	Review	
14-Mar	W	<b>EXAM 2</b>	
16-Mar	F	Intracellular compartments and Transport	15
19-Mar	M	Intracellular compartments and Transport	
21-Mar	W	Intracellular compartments and Transport	
23-Mar	F	Cell Signaling	16
26-Mar	M	Cell Signaling	
28-Mar	W	Cell Signaling	
		<i>Spring Break March 30-April 6</i>	
9-Apr	M	Cytoskeleton	17
11-Apr	W	Cytoskeleton	
13-Apr	F	Review	
16-Apr	M	<b>EXAM 3</b>	
18-Apr	W	Cell-division cycle	18
20-Apr	F	Cell-division cycle	
23-Apr	M	Cell cycle control	
25-Apr	W	Extracellular structures	20
27-Apr	F	Tissues and cell-cell interactions	
30-Apr	M	Cancer	20
2-May	W	Review	
4-May	F	<b>EXAM 4</b>	
7-May	M	Molecular Biology Techniques	
9-May	W	TBD	
11-May	F	TBD	
14-May	M	Comprehensive Review	
16-May	W	Reading Day	
18-May	F	<b>FINAL EXAM</b>	