

**BIOL 3310 Cellular and Molecular Biology**  
**Fall 2015 MWF 9:00A – 9:50A N322**

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<b>Office hours</b>	MW 10:00A-11:30A or by appointment
<b>E-mail</b>	<a href="mailto:mthao@csustan.edu">mthao@csustan.edu</a> <ul style="list-style-type: none"><li>• best method of contacting instructor</li><li>• please include your name and the course number in the subject line</li></ul>
<b>Webpage</b>	moodle.csustan.edu

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**Course description:** Introductory analysis of the structure and function of the major components of the cell with emphasis on the molecular mechanisms involved in membrane function, signal transduction, intracellular compartments and transport, cell division and apoptosis.

**Course objectives:** For students to gain factual knowledge of the structure and function of the major components of the cell and understand the basic principles of molecular biology as it applies to experimental evidence that supports the current knowledge of the cell.

### **COURSE REQUIREMENTS**

**Prerequisites:** C- or better in BIOL 1150 and CHEM 1110 or equivalent.

**Required Class Material:** Becker's World of the Cell, 8<sup>th</sup> Edition, Hardin *et al.* with Mastering (ISBN-13: 9780134381244 with printed textbook, or ISBN-13: 9780134030609 without printed textbook).

**ADD/DROP Policies:** September 21<sup>st</sup> is the census date and the last day to **drop** the course. The add/drop policies for BIOL 3310 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. If they are taken out, they will be confiscated.
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.

**\*Note: No laptops, cameras, mp3s, Ipods, cell phones, or other recording devices are allowed in class.**

### ***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, quiz or exam, an F for the class, to a maximum of expulsion from California State University, Stanislaus as indicated by the official University Policy regarding dishonesty and misconduct. Exams, quizzes, and/or other assignments are indicators of individual performance. Copying off of another student's exam, quiz, plagiarized reports, or other assignments constitutes cheating. If your phone rings during the exam, ten (10) points will be deducted from your score. Taking out a cell phone during an exam is considered cheating, your exam will be confiscated, and you will receive a zero for that exam.

2. **Class attendance is highly recommended and vital to your success in this class.** You are expected to attend class regularly, come to class on time, and complete assigned readings. 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, e-mailing, web-surfing, being disruptive, arriving late, leaving early, etc.) may be asked to leave. You are responsible for any information or assignments you missed in your absence. Quizzes you missed in your absence cannot be made up. I highly recommend reading the assigned chapters before coming to class.
3. **Unannounced quizzes.** Unannounced quizzes will be given throughout the semester to encourage students to keep up with the reading material, and discourage an unacceptable number of absences and/or students consistently showing up late for class. If you are tardy/absent and you miss the quiz, you will not be able to make it up.
4. **Make-up exams given only under extenuating circumstances and only with documentation.** Make-up exams will be different and will consist only of short answers and essay questions. Failure to appear at exam time without 24 hours prior notice to instructor with an appropriate excuse, or an appropriately documented emergency, will result in zero points for that exam.
  - a. Unless otherwise stated, exams will begin at the beginning of the scheduled class time. If you are tardy, you will not be given extra time to finish the exam.
  - b. Once exam has started, you will not be allowed to leave the room until you have finished and turned in your exam.
  - c. Questions that may appear on exams include multiple choice, matching, short answer, discussion, problem-solving and case study interpretation. You will need Scantron form # 882-E for the exams. Note that:
    - i. Only answers on the scantron will be graded, so transfer answers carefully
    - ii. Take care to erase well those answers you do not want marked
    - iii. Illegible answers in written portion will not be graded.
    - iv. Correct spelling and grammar are necessary for effective communication. Therefore, spelling and/or grammatical errors will result in loss of points on exams.
  - d. After graded exams have been returned, you have one week to review exams or dispute errors; no grades will be changes after that time.

5. **Total points for course = 625**

4 exams (75 pts each)	300 pts
10 Quizzes (5 pts each)	50 pts
Masteringbiology online homework	75 pts
Comprehensive final exam	200 pts

6. **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:**

- Take care of your grade. Remember you earn your grade; it is not given to you.
- The instructor reserves the right to reduce your grade due to excessive absences and/or tardiness.
- Grades/scores will not be sent to students via email or be given over the telephone.
- Instructor will not calculate student's scores or grade.

**\*Absolutely no late assignments will be accepted, this includes all the Mastering online homework.**

## 7. Course Page

Information for the course (**Lecture notes**, objectives, exam scores, syllabus, related materials, etc.) can be found on the course's Moodle page ([moodle.csustan.edu](http://moodle.csustan.edu)). Lecture materials **are copyrighted** and are only for the personal use of students enrolled in the course. **Do not** give your username/password to anyone else. If you do **no more** material will be provided.

How to enroll yourself in our Moodle site:

1. Go to <http://moodle.csustan.edu> and click through the Course Categories to find our class: Biology, then BIOL 3310-001: Cellular and Molecular Biology.
2. At the login screen, use your Warrior ID and Password to log in.
3. Next, in the box labelled "Student self-enrollment" use the enrollment key: **bio3310001fa15** and you will be able to access the class site.
4. If you have any problems logging in or enrolling, please email Glenn Pillsbury ([moodleadmin@csustan.edu](mailto:moodleadmin@csustan.edu)), our Moodle administrator.

## 8. Masteringbiology

- a. Register for Masteringbiology with your access code at <http://masteringbiology.com/>.
- b. Course ID = **MBTHAO98495**

**Note:** Students who fail to correctly register for the Moodle and Mastering pages by September 3<sup>rd</sup>, 2015 will be dropped from the class.

### Tentative Lecture Schedule: *Open to Revisions*

Date	Chapter	Subject	
Aug	24	1	Introduction, A Preview of the Cell
	26	1	A Preview of the Cell
		2	The chemistry of the Cell
	28	3	The Macromolecules of the Cell
31	3	The Macromolecules of the Cell	
Sept	2	4	Cells and Organelles
	4		Cells and Organelles (cont'd)
	7		Labor day, no class!
	9	5	Bioenergetics: The Flow of Energy in the Cell
	11	6	Enzymes: The Catalysts of Life
	14	7	Membranes: Their Structure, Function, and Chemistry
	16		Membranes: Their Structure, Function, and Chemistry (cont'd)
	18		Exam I (Chs. 1-6)
	21	8	Transport Across Membranes; Census date
	23		Transport Across Membranes (cont'd)
	25	12	The Endomembrane System and Peroxisomes
	28		The Endomembrane System and Peroxisomes
30	9	Chemotrophic Energy Metabolism: Glycolysis and fermentation	
Oct	2	10	Chemotrophic Energy Metabolism: Aerobic respiration
	5		Chemotrophic Energy Metabolism: Aerobic respiration
	7	11	Phototrophic Energy Metabolism: Photosynthesis
	9	13	Signal Transduction Mechanisms I
	12		Exam II (Chs 7-10, 12)

	<b>Date</b>	<b>Chapter</b>	<b>Subject</b>
Oct	14	14	Signal Transduction Mechanisms II
	16		Signal Transduction Mechanisms II
	19	15	Cytoskeletal Systems
	21		Cytoskeletal Systems
	23	16	Cellular Movement
	26	17	Cell Adhesions, Junctions and Extracellular
	28		Cell Adhesions, Junctions and Extracellular
	30	18	The Structural Basis of Information
Nov	2		<b>Exam III (Chs 10, 13-16)</b>
	4		The Structural Basis of Information
	6	19	The Cell Cycle, DNA Replication and Mitosis
	9		The Cell Cycle, DNA Replication and Mitosis
	11		<b>Veteran's Day, no class</b>
	13		The Cell Cycle, DNA Replication and Mitosis
	16	20	Sexual Reproduction, Meiosis, and Genetic Recombination
	18		Sexual Reproduction, Meiosis, and Genetic Recombination
	20	21	Gene Expression: I. The Genetic Code and Transcription
	23		Gene Expression: I. The Genetic Code and Transcription
	25		<b>Exam IV (Chs 16-20)</b>
	27		<b>Thanksgiving, no class</b>
	30	22	Gene Expression: II. Protein Synthesis and Sorting
Dec	2		Gene Expression: II. Protein Synthesis and Sorting
	4	23	The Regulation of Gene Expression
	7		The Regulation of Gene Expression
	9	24	Cancer cells
	11		<b>Reading day, no class</b>
	16		<b>Final Exam 8:30A – 10:30A (200 pts)</b>