

Cell Biology Biol380

Tentative Spring 2016 Schedule

Professor: Mary-Pat Stein, Ph.D.

Class Times and Location: MW 0800-0915, CR5125

My Office: Chaparral 5420

Office Hours: Tuesday 10-12 am; and **by appointment**

Your best mode of communication with me is via email at: mpstein@csun.edu

Course Description Biology 380: Study of the organization of cells with emphasis on **structure**, chemical composition, bioenergetics, metabolism, regulation of metabolism, cell differentiation and special cell **functions**.

Required Materials:

Text: COMPLETELY UP TO YOU: Molecular Biology of the Cell, 5th edition. Alberts et al.
eBook recommended

iPad – 32GB iPad 2, 3, or 4 (iPad 1 will not work); we recommend 32 GB but you could probably get away with 16GB; I recommend the “maxi” instead of the mini since you will be taking your exams on it, but with young eyes, maybe the mini is fine?

Apps: Explain Everything (\$3.99), Respondus Lock-Down Browser (free), Educreations (free), AbsoluteBoard (free)

Course Evaluation:

Exams – ~60% of total for course; consisting of three in-class 100-point exams and a final exam worth 150 points. **No make-up exams** will be provided. Exams will consist of multiple choice, short answers, matching and essay questions. All exams are cumulative. The final will be mostly multiple-choice. All exams will be taken on Respondus Lock-Down Browser on the iPad.

Exam #1	10%	(200 points)	03/02/15
Exam #2	10%	(200 points)	04/13/15
Exam #3	15%	(300 points)	05/02/15
FINAL	20%	(cumulative) (400 points)	05/16/15

****VERY IMPORTANT** – YOU MUST HAVE A PASSING AVERAGE ON YOUR EXAMS TO PASS THE COURSE; The other assignments/quizzes/uploads grade and CAN NOT help you unless you have a passing average. You must earn 59.5% of the points for exams ($1100 \times 59.5\% = 708.5$ points) to have the other assignments count towards your grade. Less than 708.9 points on exams is an F for the course regardless of everything else.**

In-class Uploads – 5% of total for course (100 points total); some in class uploads will be given to make sure that everyone knows important concepts; all Moodle Uploads are worth 5 points. To ensure that everyone has a fair chance, **SIX** of in-class uploads will be **dropped**. This will account for any problems with uploading to Moodle due to Internet problems throughout the semester and for being sick. SO, **don't freak out** if you miss a couple of these.

In-class Daily Quizzes – 25% of total for course (500 **points total**); all Moodle Quizzes are worth 5 points. To ensure that everyone has a fair chance, **TWO** of the daily Quizzes will be **dropped**. This will account for any problems with taking quizzes due to Internet problems throughout the semester and for being sick. SO, **don't freak out** if you miss a couple of these.

PLF or 20-PAGE TERM PAPER – 5% of total for course (100 points); each student will sign up to attend a one-hour per week PLF session; Peer-learning facilitators for this course are Wes Tierney and Kim Worland; their schedules are available on Moodle; you will primarily be graded for your ATTENDANCE and PARTICIPATION in these PLF sessions; if you show up but do NOTHING, you will get 50% of these points; I recommend making the most of your time by following directions and studying while you are at your PLF; will one hour a week make a difference – absolutely; better than not studying at all! And remember, these are basically free points to help you with your grade – so get them; if you choose the TERM PAPER option, email me in the 2nd week of classes for a topic; I will provide you with the format and requirements for you to earn full credit of this in lieu of the PLF sessions.

CLASS GENE PROJECT – 10% of total for course (200 **points total**); together we will use our time in class to examine a gene associated with a dementia. You will generate information about your gene and periodically make uploads to a Google doc or on Moodle. These assignments will be graded for completeness and your understanding of the materials. This means that students **NEED TO KEEP UP WITH WHAT WE COVER IN CLASS** and do all out of class assignments in a timely manner. Dates for periodic examination of the documents will be determined as the course unfolds. You might want to download a free app to create a



Book (Book Creator <https://itunes.apple.com/us/app/book-creator-free-make-books/id661166101?mt=8>)

Total Points for the semester: **2000**. This means that you need to earn at least 59.5% of the total points (59.5% of 2000 = 1190 points) to get credit for the class with a D-. SEE ABOVE – YOU MUST GET 59.5% of the points for EXAMS to earn a passing grade.

Final Grades will be determined on a percentage basis: total points earned out of 562.5

A	91.5-100%	B+	87.5-89.4%	C+	77.5-79.4%	D+	67.5-69.4%
A-	89.5-91.4%	B	81.5-87.4%	C	71.5-77.4%	D	61.5-67.4%
		B-	79.5-81.4%	C-	69.5-71.4%	D-	59.5-61.4%

Biology Department Withdrawal Policy: Unrestricted withdrawals are permitted only until the end of the third week. Thereafter, requests to drop a class will be honored only when a *verifiable* serious and compelling reason exists and when there is no viable alternative to withdrawal. Poor performance is **NOT** an acceptable reason for withdrawal. During the last three weeks of the semester, withdrawals will not be approved except when a student is withdrawing from ALL classes for *verifiable* medical reasons. Incomplete grades will not be given for missing exams or assignments that cannot be accomplished by the student INDEPENDENTLY. Students will not be allowed to sit in a future class without being enrolled.

University Policy on Cheating: The maintenance of academic integrity and quality education is the responsibility of each student within this university and the California State University

system. Cheating or plagiarism in connection with an academic program at a campus is listed in Section 41301, Title V, California Code of Regulations, as an offense for which a student may be expelled, suspended, or given a less severe disciplinary sanction. Academic dishonesty is an especially serious offense and diminishes the quality of scholarship and defrauds those who depend upon the integrity of the campus programs. Such dishonesty includes:

A. CHEATING

Intentionally using or attempting to use unauthorized materials, information, or study aids in any academic exercise.

B. FABRICATION

Intentional falsification or invention of any information or citation in an academic exercise.

C. FACILITATING ACADEMIC DISHONESTY

Intentionally or knowingly helping or attempting to help another to commit an act of academic dishonesty.

D. PLAGIARISM

Intentionally or knowingly representing the words, ideas, or work of another as one's own in any academic exercise.

I will not tolerate cheating. If you are caught cheating, you will receive an **automatic failure** on the exam or assignment. Please come ask me for help before resorting to such short-sited and ill-advised actions.

General Classroom Policies:

1. **Cell phones** will be turned off – any instance of a cell phone ringing or buzzing or if I catch you using your cell phone inappropriately (not doing classroom work) will cost you **\$1.00** to be paid **immediately**. The class will not continue until you pay!
2. Students will be **respectful of one another** and of me. When someone is talking, **listen** and if you want to add something, **raise your hand** and wait until called upon. If you have a problem with me or another student, I would appreciate you coming to me during office hours or after class to discuss that problem. I am a human being too and sometimes I don't realize that I may be insensitive to your needs. Please give me a chance to hear you and respond to your requests.
3. Students that are disruptive to the class or to me will be asked to leave the classroom for that day.
4. Any material presented in class is the responsibility of the student to obtain. You are responsible for getting any material that you miss **from another classmate**. I will only go over information where I deem it necessary or beneficial **to the class as a whole**. If you miss a class and there was a **one-time offer** presented to students that attended that day, you missed the opportunity (kind of like once the doors close on an airplane, you missed it even though it is still sitting there).

Final Thoughts: Cell biology is an incredibly complex and difficult subject to learn and master. I am here to help you **learn**. **You are here to study** and work hard to achieve your individual goals. If we work together, we can accomplish a lot. I will do everything in my power to get you the information you need to do well in this course. If something isn't clear, **ask questions**. You will do well in this class if you **come to lectures and participate**, do the **reading**, and **spend additional time going over your notes**. You will not do well if you cram

for exams, if you sit through class and fail to think and integrate the information into your existing knowledge about cells, and if you take a heavy course load and think that cell biology will be your easy class... I will challenge you to take the information we learn about cells and apply it to situations that you have not seen before. I will ask you to not just regurgitate facts, but to string facts together to make a story of how a particular process works. I hope to make you think about the small details and how they fit into the larger picture. And hopefully, we will both have a good time not just expanding our knowledge base, but also learning new ways to learn and retain information.

Tentative Spring 2016

Spring	General Topic	Specific Topic	Reading	Gene Project
01/25	Expectations	Introduction; Domains	Chapter 1 (pp11-26)	
01/27	Bonds and Energy	Cellular Chemistry	Chapter 2 (pp45-64;72-78)	Pick a gene
02/01	Membranes	Biological Membranes	Chapter 10	DNA and Protein
02/03		Membranes continued		Mutations
02/08	Vesicular Transport	Intracellular transport (coats, Rabs and SNAREs)	Chapter 13 (750-766)	
02/10		Intracellular transport continued		Transmembrane Domains?
02/15		Catch up		
02/17	Exocytosis	ER/Golgi and exocytosis; Transmembrane proteins	Chapter 13 (766-779; 799-809)	Structure/Function
02/22		Exocytosis continued		
02/24	Endocytosis	Endosomes, lysosomes and endocytosis	Chapter 13 (787-799)	
02/29		Endocytosis continued		
03/02		EXAM 1		
03/07	Cellular Energy	Mitochondria and energy metabolism (harvesting energy from food)	Chapter 14 (813-840)	TBD
03/09		Mitochondria and energy metabolism continued		TBD
03/14	Photosynthesis	Photosynthesis and chloroplasts (storing energy in food)	Chapter 14 (840-855)	TBD
03/16		Photosynthesis and chloroplasts continued		TBD
03/18	Nuclear Structure		Chapter 4 (195-218) Chapter 12 (704-712)	TBD
03/21	SPRING BREAK!			
03/25				
03/28	Cytoskeleton	Cytoskeleton: actin, microtubules and intermediate filaments	Chapter 16 (965-992)	TBD
3/30		Cytoskeleton and motors: dyneins, myosin and kinesins	Chapter 16 (1010-1050)	
4/4	Microscopy			
4/6	Junctions	Cell-cell contacts		

4/11	Extracellular Matrix	GAGS, Proteoglycans, Fibrous Proteins	Chapter 19 (1131-1178)	
4/13		EXAM 2		TBD
4/18	Molecular Motors	Kinesins, Dyneins and Myosin		TBD
4/20	Signaling	Cell signaling	Chapter 15	TBD
4/25	Molecular Genetics	Replication	Chapter 5 (263-304)	TBD
4/27	Transcription			
5/2		EXAM 3		
5/4	Translation	Transcription	Chapter 6 (329-366)	TBD
5/9		Cell Cycle and Translation	Chapter 6 (367-399)	TBD
5/11		Catch Up and Finish up		
5/16	8-10 am CR5125	FINAL EXAM		