MOLECULAR BIOLOGY – BIMM 100
FALL 2018, 4 UNITS

PROFESSOR: Amy Pasquinelli, 4118 Bonner Hall
E-mail: apasquinelli@ucsd.edu (please use the Subject line: BIMM100)
Phone: 858-822-3006 (please identify yourself as a student in BIMM100)

OFFICE HOURS: Thursdays, 11:00-11:50AM, Bonner 4146, starting Oct 4

TEXTBOOK: "Molecular Cell Biology, 8th Edition," Lodish et al., 2016, which will be referred to as MCB. There are copies on reserve in the Biomedical Library. The other editions cover mostly the same topics although the page numbers may be different than those listed on the Syllabus.

LECTURES: Tuesdays and Thursdays, 3:30-4:50PM
SOLIS 107
Podcast: http://podcast.ucsd.edu/

MIDTERM: October 30, Tues in class 3:30-4:50PM
FINAL: December 10, Mon, 3:00-6:00PM, SOLIS 107

WEBSITE: On Ted: http://tritoned.ucsd.edu
UCSD students should use their email username and password.
Concurrent enrollment (Extension) students are not added automatically. Extension students should obtain a registration token from Extension's student services or the ACMS Help Desk and register for an account.
More information is at: http://sdacs.ucsd.edu/~icc/ce.php

Late Adds, Waitlisted Students, Drops:

- **Students** are added to Tritoned within one business day after officially enrolling in the course in TritonLink.
- **Waitlisted students** are automatically given access (you can opt out by emailing its@ucsd.edu).
- **Students who remain on the waitlist** and other drops are removed from the course after the end of third week (or 30% through the quarter for summer session).

INSTRUCTIONAL ASSISTANTS:

Pagliuso, Delaney	dpaglius@ucsd.edu
Schiksnis, Erin	eschiksn@ucsd.edu
Chareddy, Yogitha	ycharedd@ucsd.edu
Chou, Teresa	techou@ucsd.edu
Hakim, Dominic	dhakim@ucsd.edu
Varner, Kristin	kvarner@ucsd.edu
Ochoa, Mark	m8ochoa@ucsd.edu

COURSE GOALS: Molecular biology is the study of gene structure and function at the molecular level. It fuses knowledge and discoveries from various disciplines, including Genetics, Biochemistry, Basic Biology and Organic Chemistry. You should enter this class with a solid understanding of general biology and chemistry and finish this course with a sophisticated understanding of genes and the molecules that regulate their expression and function. You will be introduced to the scientists and their amazing experimental deductions that shaped molecular biology and appreciate that this is an evolving field with frequent novel discoveries and even upheavals in dogma. If you are curious to understand how life functions at the molecular level and how scientists tackle this daunting problem, then welcome to the class and I expect you will do well in this challenging course!

PREREQUISITES: You should have successfully completed the prerequisites to register for this course: BILD 1 and BIBC 100 or BIBC 102

IA DISCUSSION SECTIONS: Sections are a valuable part of this course and you are expected to take part in them. A team of dedicated students who have recently aced this course or who are in graduate studies in this field will each lead 1 hour sections/ week. The discussions will be based on homework assignments, which will be posted on the website after class on the indicated dates on the syllabus. You should attempt the problem sets yourselves, or with friends in the class, and be prepared to go over your answers in the discussion sections. Undoubtedly, you will get the most out of the discussions if you participate in them instead of just attending to hear the answers to the problems (see tips below).

There will be no sections the first full week of class. Sections will begin the following week of Oct 8. IAs will announce their personal office hours at the first meeting of the sections. The time and location of discussion sections and office hours will also be posted on the Tritoned class website.

ASSIGNMENTS: Homework assignments will be posted on the class website at Tritoned on most Thursdays during the quarter. Assignments are used as a tool to promote understanding of the discussed topics through problem solving. While the assignments will not be handed in for grading, it is very strongly recommended that you work through the assignments either alone or in study groups. Exam questions will reflect the homework assignments.

CLICKERS: To achieve extra credit (up to 5% points added to your final average), you will need an i>clicker (iClicker1 or iClicker2). New and used i>clickers are available at the Price Center bookstore. Make sure to get an i>clicker and not a different system (such as H-ITT or PRS).

We will use clickers for rapid feedback and to foster interactive learning in a large classroom setting. Clicker questions will be used during class time to help students think about and discuss with each other how the newly presented material fits within the bigger picture of molecular biology, and how experimental observation and experimental design can address questions in molecular biology. To obtain as much credit for clicker use as possible, please register your clicker ASAP at the class website on Tritoned under “Tools”.

The extra credit is based entirely on clicker use, not on whether you get the answers right. To get credit for the whole quarter, make sure that your clicker is registered with the class at the beginning of the quarter. Cheating with clickers by having someone other than yourself using your clicker during class is considered a breach in academic honesty and will result in the loss of all clicker points for the quarter for both yourself and the person bringing your clicker, as well as any additional disciplinary actions as indicated by the policy to maintain academic honesty. Correct clicker use will be monitored by the instructor and IAs during class. It is your responsibility to remember to bring your clicker to class with a charged battery. If we use clickers in 18 classes and you participate in all 18, you will receive 5%; if you participate in 9, you will receive 2.5%, etc.

CLASSROOM ETIQUETTE: Please refrain from talking, eating, surfing the web or anything that might distract others from paying attention to the lecture. Your cell phones should be shut off and not used for talking or texting during class. If you must leave class early, please sit in the back in an aisle seat so you can exit with the least amount of disruption.

EXAMS AND GRADING: Your performance in the class will be determined by your scores on the midterm and final exams. The midterm counts for 40% of your final grade, and the final will make up the other 60% of your grade. Exam and grading policies are as follows:

- questions must be answered in ink OR in pencil with no request for a regrade
- pens and an ID card (student or driver's license) are the only personal items you need during the exam; any other items you bring (backpacks, phones, etc) must be placed entirely under your seat and are subject to being moved at the IAs' and professor's discretion
- failure to take the exam at the assigned time and place will result in a grade of zero. Extraordinary circumstances preventing you from taking an exam at the scheduled time must be submitted in writing and include official documentation of the excuse as far in advance as possible to the instructor (Dr. Amy Pasquinelli). If the excuse is accepted, the make-up will be an ORAL exam given by Dr. Pasquinelli.
- requests to reconsider any grading must be submitted in writing along with your original exam. You can personally deliver these documents to me (Dr. Pasquinelli) at the lectures or during my office hours. I must receive your full request within a week of the exam return date. Please be advised that exams may be copied, front and back, before they are returned to you. Thus, do not alter ANYTHING on an exam for which you are submitting for re-grading. Any inconsistencies will be considered a breach in academic honesty and will be grounds for failure of the course.
- I encourage you to review the University's Policy on Integrity of Scholarship: http://academicintegrity.ucsd.edu

Cheating will not be tolerated and will result in failure of this course, as well as the full extant of disciplinary actions as indicated by the University's Policy on Integrity of Scholarship. Actions may be taken for looking at your neighbors' answers, allowing your neighbor to copy, talking during the exam, using your cell phone in any way during the exam, failure to establish your ID when turning in your exam, or altering your exam prior to submission for re-grading.

- Final grades will be determined at the end of the course, based on exam scores. Grades will be calculated based on T=0.4[midterm] + 0.6[final]. Letter grades are assigned as follows:

A = 90-100
B = 80-89
C = 70-79
D = 60-69
F = 0-59

You may earn up to 5% extra credit clicker points. Also, class participation and input from IA section leaders based on participation during Discussion sections may be used to add up to 2% points for determination of your final letter grade.

LETTER OF RECOMMENDATION REQUIREMENTS: My policy for writing letters of recommendation is as follows. You must be an active participant and receive a top "A" grade in this class. For a letter to be effective, it should indicate that the student was in the highest percent of X number of students and it should provide examples of how the student earned that grade. Acceptance into programs to further your education can be very competitive and thus you should carefully choose letter writers who can honestly state that you achieved one of the top scores in their class and that you demonstrated enthusiasm, diligence and hard work in this challenging course.

DISABILITIES**:** If you qualify for accommodations because of a disability, please submit to me a letter from the Office for Students with Disabilities (OSD) before October 16 so that your needs may be addressed. The OSD determines accommodations based on documented disabilities. Please see guidelines at: http://disabilities.ucsd.edu/

TIPS FOR SUCCESS:
- Read the assigned pages in MCB before class to prepare yourself for the subject material to be covered. Pay particular attention to the "Key Concepts" at the end of each section.
- Attend the lectures. Lecture notes will be posted on the website ~24 hrs prior to each class. These serve as a guide, but not a substitute, for class and often the presentation in class will contain additional slides and more detail than the posted version. Everything presented in class is subject for examination. This will include topics and details not necessarily covered in your text or on the posted lecture notes.
- Participate in class. I prefer interactive lectures and will often ask questions. If you offer answers, not only will your attention be engaged, but the question and correct answer will also more likely become embedded in your mind. This is true even if you get the answer wrong - just the act of participating improves your memory much better than a night of cramming.
- Do the assignments. The exam questions will directly reflect the homework problems. I encourage you to work with friends and discuss the problems.
- Attend discussion sections. If you attempt the problem sets before your discussion section meets, you will have a good idea of topics that need further explanation and you can take advantage of a small class setting with an expert to help you fill in the gaps.
- Embrace the opportunity to understand the basics of molecular biology and, perhaps, one day you will contribute to this rapidly expanding and exciting field.

GOOD LUCK!

BIMM100 Fall 2018 - Syllabus

DATE*	LECTURE	TOPIC	ASSIGNMENT	PAGES#
27-SEPT	1	An Overview & DNA Structure		1-9, 41-46, 168-176
2-OCT	2	Genes & Mobile DNA		301-323
4-OCT	3	Chromosomes	1	327-349
9-OCT	4	DNA replication & telomerase		197-203, 347-349
11-OCT	5	DNA Repair & PCR	2	203-212, 239-241
16-OCT	6	Basic Transcription & Control of Gene Expression in Prok		176-180, 356-363
18-OCT	7	Control of Gene Expression in Euk (Pol II)	3	363-373, 378-380
23-OCT	8	Activators, Repressors & Transcription Initiation (Pol II)		373-377, 380-383, 373-374
25-OCT	9	Regulation of Transcription Factor Activity (Pol II)	4	381-390, 390-397, 398-404, 404-412
30-OCT		**MIDTERM** (in class)		
1-NOV	11	mRNA processing & export		180-183, 417-439, 440-445
6-NOV		NO CLASS		
8-NOV	12	Transcription by Pol I & Pol III; Translation	5	367, 412-414, 461-470, 183-197
13-NOV	13	Post-transcriptional control of gene expression		439-440, 445-447, 451-461
15-NOV	14	Non-coding RNAs	6	447-451, 264-266, 266-268
20-NOV	15	Recombinant DNA methods		234-237, 243-246, 249-251
22-NOV		THANKSGIVING NO CLASS		
27-NOV	16	Genomics	7	323-327, 247-250
29-NOV	17	Viruses		212-218, 1152
4-DEC	18	Cancer	8	1135-1168
6-DEC	19	Review		
10-DEC		**FINAL EXAM** 3-6PM		

*DATE - Classes are on Tues and Thurs from 3:30-4:50PM in SOLIS 107

#PAGES - In the text "Molecular Cell Biology, 8th Edition," Lodish et al., 2016

BIMM 100 FALL 2018
AE PASQUINELLI

DISCUSSION SECTIONS:

IA	SECTION	DAY	TIME	ROOM
Ochoa, Mark	B01	TU	8:00-8:50AM	CENTR 217A
Chareddy, Yogitha	B02	TU	9:00-9:50AM	CENTR 217A
Varner, Kristin	B03	TU	10:00-10:50AM	CENTR 217A
Chou, Teresa	B04	TU	2:00-2:50PM	CENTR 217A
Hakim, Dominic	B05	M	8:00-8:50AM	HSS 2154
Pagliuso, Delaney	B06	M	9:00-9:50AM	HSS 2154
Pagliuso, Delaney	B07	M	10:00-10:50AM	HSS 2154
Schiksnis, Erin	B08	M	6:00-6:50PM	HSS 1315
Schiksnis, Erin	B09	M	7:00-7:50PM	HSS 1315

OFFICE HOURS:

IA	DAY	TIME	LOCATION
Pagliuso, Delaney	TU	5:00-6:00PM	4146 BONNER HALL
Schiksnis, Erin	TH	9:00-10:00AM	ART OF ESPRESSO
Chareddy, Yogitha	W	10:00-10:50AM	BLUE PEPPER
Chou, Teresa	F	9:00-10:00AM	LEICHTAG 1st FLOOR LOBBY
Hakim, Dominic	W	8:00-9:00AM	AUDREY'S CAFÉ GEISEL
Varner, Kristin	TU	11:00-12:00PM	ROOTS
Ochoa, Mark	M	3:45-4:45PM	FRONT OF GALBRAITH HALL

Dr. Pasquinelli's Office Hours are 11:00-11:50AM on Thursdays in Bonner 4146.