BIMM 101 Recombinant DNA Techniques Spring 2015 Syllabus

Instructor: Dr. Tiffany Dunbar tldunbar@ucsd.edu (best way to reach me)

Office: H&SS 1145 LA (Humanities & Social Sciences - maps.ucsd.edu) 858-246-0751
Office hours: Check calendar on TED for weekly office hour, see me in lab, or by appointment.

Lecture: Tues-Thurs 2:00-3:20 PM CSB 004
Lab: Tues-Thurs 3:30 PM-7:30 PM YORK 4318 (C01/840424) or 4332 (C02/840425)

Learning goals and outcomes: Please see detailed document on TED (ted.ucsd.edu)

Objectives:
- Understand the theory behind molecular biology techniques, and the applications of the methodologies in biological research
- Be able to perform basic molecular biology techniques
- Understand and follow basic rules of lab safety and sterility techniques
- Be able to maintain proper records of your experiments, observations and conclusions
- Learn the importance of proper controls in designing experiments and interpreting results
- Improve lab math skills and ability to graph data correctly
- Be able to make logical conclusions from experimental data
- Become familiar with bioinformatics databases, applications and analyses
- Learn to find, read, and evaluate primary literature
- Improve skills of scientific writing
- Become aware of the implications of the technology for society

Reading:
1. From Genes to Genomes by Dale (1st, 2nd, or 3rd edition). Electronic versions of the 3rd and 1st editions are available on roger.ucsd.edu. The text is also on reserve in the library.
2. BIMM 101 Lab Manual from University Readers (universityreaders.com, 858-552-1120). Bring this with you to every lab meeting.
3. Course website on TED: Check this before each lab! The syllabus, announcements, lectures, study guides & practice problems, assignments, lab materials, additional required readings, lab schedule, and calendar (with office hours, due dates, etc.) are posted here.

Required Materials - bring to lab each day, required by second day of lab:
1. Labcoat (the bookstore has cheap ones)
2. UV blocking safety glasses (also at bookstore)
3. Lab notebook with carbon copies (bookstore or Grove general store)
4. Fine point Sharpie for labeling – get a dark color
5. Calculator – you cannot use a cell phone in lab!
6. Long pants and closed-toed shoes (your entire legs and feet must be covered)

Instructional Assistants: Please contact the IA for your section using their email (listed below).

Section	IA	Email
C01	Angela Tsang	t1tsang@ucsd.edu
C02	Ipshita Zutshi	izutshi@ucsd.edu

Attendance: Remember that lab attendance is required – if you miss two labs, you will be asked to drop the course. If you are ill, you must leave a message with me, not your IA, and

make up the lab in a way that I will determine. If you miss one lab with no excuse, you will lose 5% from your final grade. If you miss two labs, you will receive an F for the course.
You must be on time for lab; the IAs go over the experiments at the beginning of lab, and quizzes are given then. If you are habitually late to lab, you will lose 5% from your final grade.

I highly recommend that you attend lectures, as studies and my past experience have shown that your active participation in learning has an enormous impact on your learning.

Grading: There are 500 total points possible for this course. Final grades will be based on your total points as a percentage of 500. The following cutoffs are strictly adhered to. You can check your scores throughout the quarter on TED.

98+ = A+	87 up to 90 = B+	76 up to 79 = C+	60 up to 66= D
93 up to 97 = A	83 up to 87 = B	72 up to 75 = C	Below 60 = F
90 up to 93 = A-	80 up to 83 = B-	67 up to 71= C-	

1. Quizzes: 40% Starting the week of Apr 6th, there will be a quiz once a week on Tuesdays at the beginning of lab every week for weeks 2, 3, 4, 5, 6, 7, and 8 (see calendar on TED). Each quiz is worth 5% of your final grade, except for the quiz in week 6 which will be worth 10%. The quizzes will cover the lectures, readings, and lab experiments from the previous week, and the purpose of that day's lab. I will post a study guide for each quiz on TED. You may only request a re-grade of your quiz if you completed it in pen.
Note: <u>If you come into lab late and miss the quiz, you will receive a zero for that quiz. There are no make-ups for quizzes.</u>

2. Assignments: 30% You will turn in both lab notebook carbons and homework missions, varying in worth and format, that will total 30% of your final grade. Guidelines for each assignment will be posted on TED and due dates will be on the TED calendar. Homeworks must be submitted to Turnitin on TED before the start of lab, and all assignments must be handed within 10 minutes of the start of your lab. Assignments that are handed in late that day will be penalized by deducting 5%, and each additional day an assignment is late another 5% will be deducted.
Although you will be doing the experiments and collecting data with a partner, you must hand in your own assignments, written in your own words. **Copying someone else's homework is cheating (see below). This also means copying from past quarters!**

3. Final Exam: 30% There will be a comprehensive exam on the last day of class, June 4th, in lab during your lab period. <u>There are no make-ups for the final exam.</u>

4. Participation, lab performance, and experimental success: Your preparedness for lab, your participation in class, and the quality and success of your experiments will all be considered when assigning your final grade. This will be especially important if you are on the borderline between grades.

Lab notebook (see pages 156-157 in lab manual): It is mandatory that you keep a lab notebook, which your IA's will check at the end of every lab for completeness. It should contain the following:

- Purpose: objective of the lab in your own words (why are you doing the experiment?)
- Methods: pages of protocol/procedure and any changes you made to it, relevant charts
- Results: all calculations and data you collect, observations
- Conclusions: summarize and interpret results, labeling & location of samples

Policy on cheating: Anyone caught cheating (this includes plagiarizing homework assignments or carbons, cheating on a quiz or exam, or changing an answer for a re-grade) will be reported to the Academic Integrity Office.

Note: Just coming to lab does not ensure that you will get a passing grade in the class. You must hand in all assignments and get an average of 67 to get a C- in the class.

Letters of recommendation: Letters of recommendation will only be written for students who receive an A or an A+, have good academic records and realistic goals, and who have been active participants in the in the course (I need to know who you are because you have come to office hours, or you have asked/answered questions in class, or talked to me in lab, etc.). If I think I don't know you that well or don't have too much to say about you, don't take it personally but I will probably decline your request to write a letter. If you think you may want a letter of recommendation at some point in the future, save your graded quizzes and assignments.